3. Earthquake Mitigation and Response Checklists – Local Planning Guide-

Earthquake Mitigation and Response Checklists -Local Planning Guide-

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Table of Contents

I. Introduction

This Guide is designed as a tool to assist in improving institutional capacity for earthquake disaster mitigation and response. It is intended to be used by local governments and institutions in the Metropolitan Manila Area.

The Guide encompasses the documentation for two separate but closely related local disaster management planning processes:

- The first—Earthquake Mitigation Checklist—is designed to assist a local government or institution to evaluate or assess its present capacity for earthquake disaster mitigation, and based on the assessment, launch a mitigation planning process.

- The second—Emergency Response Pocket Guide—provides a draft guide to key information needed by local agencies and officials for effective response to a disaster. By customizing the draft Pocket Guide to meet its own needs and situation and then providing copies to local officials and staff, a city or municipality is upgrading its emergency response capability and is alerted to other needs and actions it should take, e.g. arranging for training and procurement of equipment.

To make best use of this Guide, local planners or disaster action officers are invited to utilize the documents it contains either as they are written or to revise them at will. It is recommended to convene workshops including representatives of all local agencies with an interest or role in any phase of disaster management (mitigation, preparedness, response, or recovery) and engage these representatives in inter-disciplinary working groups to each address a specific set of tasks. Sample workshop agendas and working documents are included in the Appendices to this Guide.

II. Background

This Guide was developed through interaction between the City of Makati and the Study Team of the Metropolitan Manila Earthquake Impact Reduction Study (MMEIRS); specifically, it reflects the preparations for, conduct of, and outputs from two two-day workshops conducted in September and November 2003 at Makati City Hall.

The MMEIRS Study was undertaken in 2002 by the Government of Japan at the request of the Government of the Republic of the Philippines to assist in the formulation of a master plan for earthquake impact reduction for Metropolitan Manila. Numerous earthquake sources, including the Valley Fault System, are located in and around Metropolitan Manila, posing a serious threat to life, property, and the social, political, and economic activities of the National Capital Region.

Local governments in the Philippines have special responsibilities in regard to reducing the impacts of potential disasters such as earthquakes. Cities, municipalities, and barangays are empowered by national law (through the passage of RA 7160 in 1991 which established the Local Government Code) to create or organize themselves into institutional mechanisms that will effectively counter disasters.

The cities under Section 558 (iv) shall:

> *"Adopt measures to protect the inhabitants of the city from the harmful effects of man-made or natural disasters and calamities, and to provide relief services and assistance*

for victims during and in the aftermath of said disasters or calamities and in their return to productive livelihood following said events;"

Similar provisions are included in the Code for municipalities and barangays.

Additionally, Presidential Decree 1566, signed in 1978, established disaster management policies of self reliance and self help, as well as mandating that all entities are to have emergency plans. And while the functions and responsibilities of the City/Municipal Disaster Coordinating Councils are defined on paper, there are few examples of detailed manuals or Standard Operating Procedures (SOPs) to guide staff in effectively carrying out specific disaster-related responsibilities. Therefore, this Guide was designed to assist local governments in carrying out their disaster management responsibilities.

III. Aim and Objectives

The aim of the Guide is to provide a format and tools for local governmental entities to replicate the local mitigation and preparedness planning effort undertaken by the City of Makati. The goal is to enhance capacity for earthquake mitigation and readiness for response to an earthquake or other disaster. By carrying out the planning process outlined in this Guide, it is hoped that cities and municipalities will gain confidence and competence in dealing with earthquake and other disaster risk.

The objectives are to:

1. Identify the basic essentials necessary in earthquake disaster mitigation including inventory of resources.

2. Provide a systematic procedure how these essential requirements can be complied and implemented.

3. Review the city's existing plans and procedures for adequacy in coping with an earthquake.

4. Develop a guide for earthquake preparedness and response (roles, responsibilities, checklists of actions to be taken).

5. Internalize the need to prepare for an earthquake disaster, and strengthen capacity, competence, and confidence for responding to any disaster.

IV. Earthquake Mitigation Checklist: Concept, Process and Outputs

Rationale

This two-day workshop had the following objectives:

6. Identify the basic essentials necessary in earthquake disaster mitigation including inventory of resources

7. Develop a systematic procedure how these essential requirements can be complied and implemented.

8. Utilize the exercise as a tool for participants to internalize the need to prepare for an earthquake disaster.

4. Develop a model workshop methodology applicable for other cities in Metro Manila

The Mitigation Checklist

Following is a checklist of some basic requirements in preparation for an earthquake disaster and mitigation of its impacts.

a. Legal Framework

b. Local Policy on Earthquake Mitigation

c. Organization and Personnel

d. Definition of Roles and Responsibilities of offices and officials

e. Plans and Programs

f. Earthquake Disaster alert program

g. Earthquake Disaster Evacuation Plan

h. Earthquake Disaster Recovery Plan

i. Earthquake Disaster Management Reporting System

j. Earthquake Disaster Management and Information Technology

k. Earthquake Disaster Management Training Programs and Policies

l. Public Education and community awareness program on Earthquake

m. Manual on Earthquake Mitigation

n. Budget for Disaster Management

o. Earthquake Disaster Management Performance Audit

p. Community based Disaster Mitigation

q. Inter Local Disaster Cooperation agreement

r. Inventory of Disaster Tools

s. Inventory of City Resources

Conduct of the Workshop

Colonel Victor Pagulayan, the Disaster Coordinating Officer for Makati, presided over the two-day workshop, assisted by the MMEIRS Study Team.

The Study Team presentations were made prior to the Workshop Proper:

1. Urban Hazards and Risks in Metro Manila Area made by. Ms. Kanako Iuchi, Urban Specialists

2. Health and Medical Response during an Earthquake by Mr. Kazumi Akiko, Health Specialist

3. Community-Based Disaster Mitigation by Ms. Tomoko Shaw, Community Development Specialist

4. GIS Disaster Map by Engr. Joel Cruz, GIS Specialist

After the four presentations, Colonel Victor Pagulayan explained briefly the importance of the 19 items to be examined and verified as to the status of each in the overall preparations of Makati for earthquake mitigation.

Thereafter, the 35 participants (mostly department heads and assistant department heads) were divided into three working groups. There ensued a solid eight hours of workshop discussions, after which the three groups prepared their respective reports.

Working Group reports were presented during the plenary session which started at 10:00 a.m. on the second day of the workshop.

The MMEIRS Study Team reacted and gave comments as input to the group reports. The inputs of the members of the Study Team were very important since the participants were advised by Mayor Jejomar C. Binay to make a good work in the workshop. The primary reason is that the participants' outputs will be the framework of the Makati City Master Plan for Earthquake Mitigation.

Lessons Learned from the Workshop

The following lessons were learned through the workshop experience:

1. It was the consensus expressed by the participants that the workshop was a functional experience to all of them.

2. The workshop has high educational value to all concerned in disaster mitigation.

3. The workshop exercise allowed the City of Makati to inventory what were the mitigation requirements that were already placed as well as those to be acted upon by the city government.

4. Workshop exercise and the output produced will serve as a framework for the Master Plan of Makati City in Earthquake Mitigation.

5. The workshop exercise is highly replicable in other cities in the National Capital Region which can be initiated by the mayors and the Disaster Coordinating Officers.

It is important to know that the participants in the workshop were given instructions by the Mayor of Makati to continue the workshop until such time that a full blown framework for disaster mitigation of the city will be formulated.

These lessons support objectives Nos. 1, 2, 3, and 4 under the rationale of the workshop design on Earthquake Mitigation Checklist.

Outputs from the Workshop

The Workshop produced the following outputs:

1. The reports of the three working groups which will be used by Makati as a framework of the City's Master Plan for Earthquake Mitigation

2. Partial inventory of equipment of selected departments.

3. An instruction from the Mayor to continue the planning effort to develop the Master Plan mentioned in output #1.

V. Emergency Response Guide: Concept, Process and Outputs

Rationale

A "response operations manual or pocket guide" was identified by the respondents to a questionnaire at the MMEIRS Second Workshop (August 2003) as their top priority tool to enhance emergency preparedness and response.

The concept is to create a handy guide for local public officials on priority actions to be taken when an earthquake or other major emergency occurs. The guide would fit in one's pocket and include such elements as:

- Key contact information
- Responsibilities of key officials
- Checklists of what to do
- Reporting instructions and formats

It would emphasize preparedness and immediate response operations presented in a simple-to-use format.

The primary intended users and beneficiaries of the pocket guide would be:

- Mayors
- Disaster action officers
- City and barangay level Disaster Coordinating Council members

The Preparedness / Response Checklist

The following items comprise the contents of the draft version of the Emergency Response Pocket Guide as amended in the Makati City Workshop. Note that an annotated outline of the Pocket Guide is included in Appendix 7, and a complete draft of the Pocket Guide is a separate attachment.

1. Table of Contents
2. Emergency telephone numbers / key contact information
3. Introduction
4. Operational priorities in case of emergency
5. Local organization for disaster management
6. Incident Command System (ICS) and command structure
7. Communications, alert and warning
8. Check lists of responsibilities and actions during disaster
9. Information checklist for decision-making during disaster

10. Situation and needs assessment
11. Disaster Operations Center (DOC)
12. Multi-agency coordination and mutual aid
13. Evacuation procedures
14. Medical aid and assistance
15. Emergency public information
16. Recovery
17. Employee emergency responsibilities
18. Employee preparedness
19. Public officials' emergency kit
20. Key provisions of the City Disaster Management Ordinance
21. Sources and references

The Development Process

The pocket guide should be developed through the efforts of the local government (or other) officials and employees who will use it. The recommended steps in the process are:

1. Determine the draft list of key elements to be included in the pocket guide.
2. Get the support of the chief executive or administrative officer.
3. Hold a planning meeting to organize the workshop, determine participant list and composition of the working groups.
4. Hold the workshop (see Program in the Appendix).
5. Follow-up to ensure assignments not completed during the workshop are completed and submitted to the project coordinator.
6. If a follow-up meeting is necessary, at the meeting review the completed overall draft of the guide and secure acceptance by all participants.
7. The City accepts and prints copies for its own needs.

Conduct of the Workshop

The primary purpose of the workshop is to enhance city preparedness for emergency response by developing an emergency response pocket guide for local officials.

The objectives are to:

- Review the city's Standard Operating Procedure for adequacy in coping with an earthquake
- Develop a guide for earthquake preparedness and response (roles, responsibilities, checklists)
- Strengthen capacity, competence, and confidence for responding to any disaster

The Opening Plenary Session included the following:

1. Welcome and Introductory Comments

2. Background and follow-up to September 25-26 Workshop: Status of the Earthquake Disaster Mitigation Framework

3. Purpose and objectives of the workshop and the guide (discussion and revision or validation)

4. Discussion of target audience(s), and whether or not it is one pocket guide for everyone, or different versions for different audiences

5. Review outline of contents (discussion and revision or validation)

6. Assignments to working group assignments

Working Group Sessions

The working group sessions consisted of the following tasks:

1. Detailed review of contents for assigned sections—what exists, what needs to be updated, what needs to be newly developed

2. Update existing materials and develop new sections in pocket guide format

Closing Plenary Session

The closing plenary session consisted of:

1. Reports from the working groups on what sections were completed and what follow-up actions are needed and who will take them

2. Discussion of next steps, and

3. Closing remarks

Lessons Learned from the Workshop

The primary lessons learned from the workshop are:

1. The workshop built on the collaborative spirit and teamwork already established within the work groups which had been formed for the Workshop on Earthquake Mitigation Checklist held two months earlier. Therefore, the work groups were

able to launch immediately into their assignments and were successful in completing the major share of the development of the Guide within the two days.

2. It was worthwhile to have a pre-developed draft of the proposed sections of the Guide so that the working groups had something to react to and to revise as appropriate.

3. It would have been helpful for each work group to have a laptop computer at the workshop to facilitate preparation of work group reports and revisions of the pre-drafted sections of the Guide.

Outputs from the Workshop

The workshop produced work group reports relating to the various items included in the Pocket Guide contents. These outputs have already been incorporated into the final draft version of the Emergency Response Pocket Guide, which is provided as an attachment to this Guide.

VI. Principles and Practice of Mitigation and Response Planning

This Guide presents only a single approach to each of two disaster management planning tasks: (1) mitigation planning, and (2) emergency response planning. What is described herein represents what might be called a "short cut" approach or process, rather than following other established planning processes that have been tested in a variety of countries and socio-political realities. The processes outlined in this Guide, while based on international experience, have only been tested in one locality—Makati City. They are based on the foundation provided by the hazard and risk assessment accomplished by the MMEIRS Study, which evaluates earthquake risk in Metropolitan Manila, and the existing body of preparedness and response plans and procedures already in place in Makati City. Therefore, it was possible to "short cut" the steps in an ideal disaster management planning process.

Note that in the next chapter (Chapter VII. Resources and Guides), information is provided to facilitate access to other accepted approaches and practices in mitigation and emergency response planning.

Mitigation and Emergency Response Planning

Ideally, both mitigation and emergency response planning follows an established step-by-step procedure that usually takes months or years to complete. The following are characteristics of an effective planning process.

1. The process should be inclusive, drawing input from as wide a range of stakeholders as possible.

2. The process should start by focusing on policies, objectives, and goals, which should be reached by consensus and clearly articulated.

3. The goals and planning process should be integrated with the city's overall strategies and programs; that is, hazard reduction, land use planning and disaster management planning should approached and debated in ways that are similar to, or the same as, other important issues and decisions in the community.

4. The major part of the work should be done by persons in the government agencies and other organizations who will have roles in carrying out the plan.

5. The planning process should be considered as a continual cycle of:
   Planning
   Familiarization and training
   Drills and exercises to test the plan, and
   Plan revision and updating.

Getting Started

The initial development of a disaster mitigation or response plan can be approached by:

- Getting the support of the mayor or chief executive
- Determining who will be responsible for initiating and overseeing the project and developing a proposed "game plan."
- Convening interested and affected parties
- Deciding on goals, objectives, and scope and contents of the plan
- Establishing multi-disciplinary working groups or committees to work on specific sections of the plan
- Providing a mechanism for overall coordination of the work effort, setting and monitoring of milestones, and integration of the plan elements, and
- Achieving consensus and sign-off by the responsible parties.

All plans build on a foundation of hazard assessment and determining what activities, institutions and structures are at risk from those hazards. On the basis of the hazard and risk assessment, we can identify, evaluate, select, implement, and institutionalize both short-term and long-term actions and programs to mitigate those hazards.

The plan, then, begins with careful evaluation of the hazards facing the community, their severity and frequency, and analysis of what elements (geographic areas, types of building construction, etc.) in the city are most vulnerable to the hazards or most at risk. The plan also considers what resources and capabilities are available in the city to reduce risk and protect against disaster, and establishes what institutions or organizations have responsibilities in regard to a broad range of disaster related functions.

Products of the Planning Process

While it is most important to focus on the planning process, because the process itself benefits the City and the participants by improving awareness of risk and protective actions, the plan itself is important as a guide to future actions. The best plans have the following characteristics. They:

- Reflect the community and its social, economic and political realities
- Are simple, easily understood, and clearly organized
- State clear policies, objectives and operational priorities
- Define responsibilities, authorities, and operational relationships
- Provide systems for multi-organization coordination
- Provide timely and accurate information to decision-makers and the public
- Involve non-governmental and community-based organizations, and
- Are recognized and accepted by all involved organizations and the community.

VII. Resources and Guides

Following is an annotated list of some of the best available resources and guides to assist in disaster management planning.

National Disaster Coordinating Council - Office of Civil Defense (NDCC–OCD) and United Nations High Commissioner for Refugees (UNHCR), Contingency Planning for Emergencies: A Manual for Local Government Units, First Edition, December 2002.

> This valuable manual was developed to strengthen and enhance the operational capabilities of the local government units in responding to any emergency situation in their localities. It is available through the Office of Civil Defense.

Metropolitan Manila Earthquake Impact Reduction Study (MMEIRS), Disaster Mitigation Handbook, 2003/4. It is anticipated that the Handbook will be made available through the Metropolitan Manila Development Authority (MMDA).

The Federal Emergency Management Agency (FEMA) of the United States has made a large number of valuable planning guides and other documents available on its website: www.fema.gov or through its publications center:

> FEMA Publications Distribution Center
> 8231 Stayton Driver
> Jessup, MD 20794 USA
> Telephone: (202) 646-3484
> Fax: (301) 497-6378
> http://www.fema.gov

Federal Emergency Management Agency, How -To Guides on Developing the Mitigation Plan for state and local governments (available in PDF version at http://www.fema.gov).

Federal Emergency Management Agency, State and Local Guidance 101: Guide for All-Hazard Emergency Operations Planning, 1996.

> This is also how-to guidance provided to state and local governments by the United States' federal agency that oversees all aspects of emergency management. In addition to generic all-hazards planning, it includes hazard-specific annexes on a variety of natural and technological or man-made hazards.

Federal Emergency Management Agency, The CEO's Disaster Survival Kit: A Common-Sense Guide for Local Government Chief Executive Officers, undated.

Governor's Office of Emergency Services, State of California, Emergency Planning Guidance for Local Government, Volume 2 – Model City Plan, 1998.

> Like FEMA, the State of California has made planning guides and documents geared toward state agencies and local governments available on its website, www.oes.ca.gov

The California Seismic Safety Commission, The California Earthquake Loss Reduction Plan 2002-2006, 2002.

This Plan (and preceding versions) was developed in fulfillment of a mandate enacted by the Legislature in the California Earthquake Hazards Reduction Act of 1986. For access to this and other publications, visit its Web site.

California Seismic Safety Commission
1755 Creekside Oaks Dr., Suite 100
Sacramento, CA 95833, U.S.A.
www.seismic.ca.gov

The Australian and New Zealand Risk Management Standard (AS/NZS 4360:1999 2nd Edition)

This Standard provides a formalized, systematic decision-making process with which to identify solutions to issues such as vulnerability to natural hazards.

Natural Disasters Organisation, Australian Emergency Manual: Community Emergency Planning Guide, 2nd Edition, Australia, 1992.

This straight-forward and useful Manual is designed to assist in emergency planning at the community level. It was published as part of The Australian Emergency Manual Series. Inquiries should be sent to:

The Director General
Natural Disasters Organization
PO Box 1020
Dickson, ACT 2602, Australia

International Secretariat for Disaster Reduction, Living with Risk, United Nations, ISDR Secretariat, 2002.

The Institution of Civil Engineers, Megacities: reducing vulnerability to natural disasters and David Key, ed., Structures to Withstand Disasters, Thomas Telford Publications, 1995.

Megacities and its companion volume are excellent resources on all aspects of emergency management and disaster vulnerability reduction, particularly in large cities. Megacities draws from case study visits to Karachi, Jakarta, and Manila. Structures contains case studies from 8 countries on disaster preparedness and hazard mitigation and related topics. Both volumes contain practical information for emergency managers, administrators, and planners. They are available from:

Thomas Telford Publications
Thomas Telford Services Ltd
1 Heron Quay
London E14 4JD England

Drabek, Thomas E. and Gerald J. Hoetmer, ed., Emergency Management: Principles and Practice for Local Government, International City Management Association, 1991.

This is part of the highly regarded Municipal Management Series of publications by the ICMA (other volumes cover local and regional planning management). Although almost 13 years old (it is currently being revised for re-publication), this 1991 text sets a standard in coverage of all aspects of emergency management

including hazards management and mitigation, community involvement, preparedness, response and recovery.

International City Management Association
777 N. Capitol Street, Suite 500, N.E.,
Washington, DC 20002 USA

APPENDIX 1
Earthquake Mitigation Checklist Workshop Program

Metro Manila Earthquake Impact Reduction Study
EARTHQUAKE MITIGATION CHECKLIST
Pio del Pilar Conference Room
Makati City Hall
September 25-26, 2003

P R O G R A M

Day I

8:30am-9:00am	-	Registration of participants
9:00am -9:15 am	-	Welcome Remarks
		a) City Administrator Nicanor V. Santiago, Vice Chairman of the MDCC
		b) Colonel Victor Pagulayan, City Disaster Coordinating Officer
9:15am-10:30am	-	MMEIRS presentations
Risk Areas and Resources		Ms. Kanako Iuchi Urban Planner
CBDM under MMEIRS		Ms. Tomoko Shaw CBDM Expert
Health and Medical Response Plan		Mr. Kazumi Akita Health Specialist
MMEIRS Disaster Information System		Mr. Joel Cruz GIS Specialist

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10:30am-10:40 am	-	Coffee Break
10:40am-11:00am	-	Discussion on Workshop Guides
11:00am-12::nn	-	Workshop Groups in Session
12:00nn-1:30pm	-	Lunch Break
1:30pm-5:00pm	-	Workshop continues

Day 2

8:30am-10:00am	-	Formulation/Completion of Workshop Reports
10:00am-10:30am	-	Coffee Break
10:30am-12:30pm	-	Presentation of Workshop Reports in Plenary Session
12:30pm-12:45pm	-	MMEIRS Study Team make comments
12:45pm-1:30pm	-	Lunch Break
1:30pm-3:00pm	-	Work Group Discussion continues in compliance with Mayor Binay's instructions

APPENDIX 2 – WORKSHOP PAPERS

Workshop Paper No. 1

Workshop on Earthquake Mitigation Checklist

I. Rationale

This two-day workshop has the following objectives:

1. Identify the basic essentials necessary in earthquake disaster mitigation including inventory of resources

2. Develop a systematic procedure how these essential requirements can be complied and implemented.

3. Utilize the exercise as a tool for participants to internalize the need to prepare for an earthquake disaster.

II. **Checklist** of some basic requirements in preparation for an earthquake disaster. Brief discussion / explanation of each is useful.

1. Legal Framework
2. Local Policy on Earthquake Mitigation
3. Organization and Personnel
4. Definition of Roles and Responsibilities of offices and officials
5. Plans and Programs
6. Earthquake Disaster alert program
7. Earthquake Disaster Evacuation Plan
8. Earthquake Disaster Recovery Plan
9. Earthquake Disaster Management Reporting System
10. Earthquake Disaster Management and Information Technology
11. Earthquake Disaster Management Training Programs and Policies
12. Public Education and community awareness program on Earthquake
13. Manual on Earthquake Mitigation
14. Budget for Disaster Management
15. Earthquake Disaster Management Performance Audit
16. Community based Disaster Mitigation
17. Inter Local Disaster Cooperation agreement
18. Inventory of Disaster Tools
19. Inventory of City Resources

III. Instructions

1. IN THE EVENT THAT ANY OF THE ITEMS 1 TO 19 AS LISTED IN PART II ARE NOT ESTABLISHED OR ARE NOT IN PLACE, PLEASE INDICATE HOW WILL ANY OF THESE ITEMS ARE TO BE IMPLEMENTED. WHO WILL BE IN CHARGE OF IMPLEMENTING THEM AND WHEN SHOULD IT BE IMPLEMENTED. PLEASE USE PAPER NO. 2 FOR THIS EXERCISE.

2. IN THE EVENT THAT SOME OF THE ITEMS (1-19) LISTED IN PART II ARE ALREADY ESTABLISHED OR IN PLACE WHO ARE THE RESPONSIBLE OFFICIALS CONCERNED PLEASE INDICATE BEFORE, DURING AND AFTER AN EARTHQUAKE OCCURS. PLEASE USE PAPER NO. 3

IV. Workshop Plan and Expectations

THE RESULT OF THIS WORKSHOP WILL CONSIST OF A LISTING OF BROAD CATEGORIES OF DOABLE ACTIONS CONCERNING THE ITEMS IN THE CHECKLIST NOW AND IN THE IMMEDIATE FUTURE.

THIS PART OF THE WORKSHOP EXERCISE WILL ALLOW THE PARTICIPANTS TO THINK WHAT ARE THE ESSENTIAL THINGS TO BE PREPARED. LIKEWISE IT WILL FORCE THE PARTICIPANTS TO ASSIGN SPECIFIC TASKS TO SPECIFIC INDIVIDUALS. WHO ARE LIKELY MOST RELEVANT TO THE TASKS.

IT IS, THEREFORE, NECESSARY THAT THE WORKSHOP RESULTS BE DOCUMENTED AND MADE READABLE FOR THE OTHERS TO USE AS SAMPLE OR GUIDE.

WHEN THE PROCEDURES OF LISTING MITIGATION REQUIREMENTS ARE SYSTEMATICALLY DEVELOPED, AND THEN PROPERLY DOCUMENTED IT CAN SERVE AS A GUIDE IN FORMULATING AN EARTHQUAKE MITIGATION PLAN FOR CITIES AND MUNICIPALITIES IN METRO MANILA AREA.

V. Role of Participants

PARTICIPANTS WILL BE SELECTED HEADS OF CITY DEPARTMENTS, BARANGAY CAPTAINS, NGOS AND PRIVATE SECTOR REPRESENTATIVES.

PARTICIPANTS ARE EXPECTED TO ACTIVELY CONTRIBUTE THEIR EXPERIENCES AND KNOWLEDGE ON THE SUBJECT DURING THE WORKSHOP.

WORKSHOP ON EARTHQUAKE MITIGATION CHECKLIST

INSTRUCTIONS:

PLEASE CHECK STATUS OF EACH ITEM IN MAKATI CITY PREPAREDNESS PLAN IN CASE OF AN EARTHQUAKE. IF SOME OF THEM ARE ALREADY ESTABLISHED, ARE THEY ADEQUATE OR DO THEY NEED UPDATING. IN THE EVENT THAT SOME ARE NOT ESTABLISHED YET, PLEASE EXPLAIN IN COLUMN 4 HOW IT SHOULD BE DONE. PLEASE USE ADDITIONAL PAPER IF MORE SPACE IS REQUIRED.

AREAS OF CONCERNED	ALREADY ESTABLISHED *(PLEASE CHECK IF APPLICABLE)*	NOT YET ESTABLISHED *(PLEASE CHECK IF APPLICABLE)*	STEPS TO TAKE TO ESTABLISH WHAT ARE LACKING
1. LEGAL FRAMEWORK			
2. LOCAL POLICY ON EARTHQUAKE MITIGATION			
3. ORGANIZATION AND PERSONNEL			
4. DEFINITION OF ROLES AND RESPONSIBILITIES OF OFFICES AND OFFICIALS			
5. PLANS AND PROGRAMS			
6. EARTHQUAKE DISASTER ALERT PROGRAM			
7. EARTHQUAKE DISASTER EVACUATION PLAN			
8. EARTHQUAKE DISASTER RECOVERY PLAN			
9. EARTHQUAKE DISASTER MANAGEMENT REPORTING SYSTEM			

AREAS OF CONCERNED	ALREADY ESTABLISHED *(PLEASE CHECK IF APPLICABLE)*	NOT YET ESTABLISHED *(PLEASE CHECK IF APPLICABLE)*	STEPS TO TAKE TO ESTABLISH WHAT ARE LACKING
10. EARTHQUAKE DISASTER MANAGEMENT AND INFORMATION TECHNOLOGY			
11. EARTHQUAKE DISASTER MANAGEMENT TRAINING PROGRAMS AND POLICIES			
12. PUBLIC EDUCATION AND COMMUNITY AWARENESS PROGRAM ON EARTHQUAKE			
13. MANUAL ON EARTHQUAKE MITIGATION			
14. BUDGET FOR DISASTER MANAGEMENT			
15. EARTHQUAKE DISASTER MANAGEMENT PERFORMANCE AUDIT			
16. COMMUNITY BASED DISASTER MITIGATION			
17. INTER LOCAL DISASTER COOPERATION AGREEMENT			
18. INVENTORY OF DISASTER TOOLS			
19. INVENTORY OF CITY RESOURCES			

POSITION OF RESPONDENT: _____

Date of Completion: _____

WORKSHOP ON EARTHQUAKE MITIGATION CHECKLIST

INSTRUCTIONS:

PLEASE INDICATE THE CITY OFFICIALS WHO SHOULD BE IN CHARGE OF CERTAIN RESPONSIBILITIES, BEFORE, DURING AND AFTER AN EARTHQUAKE. YOU MAY USE ADDITIONAL PAPER IF MORE SPACE IS REQUIRED UNDER REMARKS.

AREAS OF CONCERN	PERSONS RESPONSIBLE BEFORE AN EARTHQUAKE	PERSONS RESPONSIBLE DURING AN EARTHQUAKE	PERSONS RESPONSIBLE AFTER AN EARTHQUAKE	REMARKS
1. LEGAL FRAMEWORK				
2. LOCAL POLICY ON EARTHQUAKE MITIGATION				
3. ORGANIZATION AND PERSONNEL				
4. DEFINITION OF ROLES AND RESPONSIBILITIES OF OFFICES AND OFFICIALS				
5. PLANS AND PROGRAMS				
6. EARTHQUAKE DISASTER ALERT PROGRAM				
7. EARTHQUAKE DISASTER EVACUATION PLAN				
8. EARTHQUAKE DISASTER RECOVERY PLAN				
9. EARTHQUAKE DISASTER MANAGEMENT REPORTING SYSTEM				
10. EARTHQUAKE DISASTER MANAGEMENT AND INFORMATION				

AREAS OF CONCERN	PERSONS RESPONSIBLE BEFORE AN EARTHQUAKE	PERSONS RESPONSIBLE DURING AN EARTHQUAKE	PERSONS RESPONSIBLE AFTER AN EARTHQUAKE	REMARKS
TECHNOLOGY				
11. EARTHQUAKE DISASTER MANAGEMENT TRAINING PROGRAMS AND POLICIES				
12. PUBLIC EDUCATION AND COMMUNITY AWARENESS PROGRAM ON EARTHQUAKE				
13. MANUAL ON EARTHQUAKE MITIGATION				
14. BUDGET FOR DISASTER MANAGEMENT				
15. EARTHQUAKE DISASTER MANAGEMENT PERFORMANCE AUDIT				
16. COMMUNITY BASED DISASTER MITIGATION				
17. INTER LOCAL DISASTER COOPERATION AGREEMENT				
18. INVENTORY OF DISASTER TOOLS				
19. INVENTORY OF CITY RESOURCES				

POSITION OF RESPONDENT: _____

Date of Completion: _____

Workshop Paper No. 4

WORKSHOP ON EARTHQUAKE MITIGATION CHECKLIST

WORKSHOP GUIDE:

1. PARTICIPANTS WILL BE BRIEFED ON THE IMPORTANCE OF THE 19 ITEMS NECESSARY IN EARTHQUAKE MITIGATION.

2. PARTICIPANTS TO REVIEW WHICH OF THE 19 ITEMS NECESSARY IN EARTHQUAKE MITIGATION ARE ALREADY IN PLACE IN MAKATI. ARE THEY OPERATIONAL OR ADEQUATE OR PERHAPS NEEDS UPDATING.

3. WHAT SHOULD BE DONE WITH THOSE ITEMS STILL NOT IN PLACE? HOW SHOULD THEY BE ESTABLISHED? THE PARTICIPANTS WILL BE DIVIDED INTO SEVERAL WORKING GROUPS THAT WILL BE TASKED TO PROVIDE THE NECESSARY ANSWERS.

4. WHO SHOULD BE IN CHARGE OF FORMULATING THESE MITIGATION MEASURES?

5. WHAT TRAINING INTERVENTIONS ARE NECESSARY IN EARTHQUAKE MITIGATION PREPARATION? PLEASE LIST THEM DOWN.

Workshop Paper No. 5

1. In relation to Workshop document No. 4, participants are to submit their group reports subject to the comments and reactions of the members of the Study Team.

2. The reports of the working groups should clearly indicate the status of each of the 19 items in the Mitigation Checklist

3. The workshop coordinator will decide which agency in the city government will be accordingly grouped in relation to their respective functional mandates.

4. The work group reports are expected to be refined after the reactions of the Study Team members. The purpose of refining the Report is to use it as benchmarking document in the formulation of a full blown framework for Earthquake Mitigation for Makati City.

APPENDIX 3
Groupings for the Workshop on Disaster Mitigation Checklist

TOPICS	DEPARTMENT / OFFICE / AGENCIES
GROUP I	
• **Legal Frame work**	**UDD**
• **Local Policy on Earthquake Mitigation**	**Office of City Engineer** **Building official**
• **Organization & Personnel**	**LIGA, Pres.**
• **Plans & Programs**	**Budget Officer**
• **Definition of Roles & Responsibilitie of Offices & Officials**	**Rotary**
• **Budget for Disaster Management**	
• **Earthquake Disaster Management & Information Technology**	
• **Inter Local Disaster Cooperation Agreement**	
• **Manual for Earthquake Mitigation**	
GROUP II	
• **Earthquake Disaster Evacuation Plan**	**MSSD**
• **Earthquake Disaster Recovery Plan**	**Eng'g I & II**
• **Inventory of Disaster Tools**	**Health** **Police** **MAPSA** **OSMAK** **Rescue** **Barangays (Bel-Air, San Lorenzo & Pio del Pilar)**
GROUP III	
• **Earthquake Disaster Alert Program**	**Education**
• **Earthquake Disaster Management Training Programs & policies**	**Communication Section**
• **Public Education & Comity Awareness Program on Earthquake**	**Baranagys (Urdaneta, San Antonio & Poblacion)**
• **Earthquake Disaster Management Reporting System**	**Fire**
• **Community based Disaster Mitigation**	

APPENDIX 4 – WORK GROUP REPORTS
WORKSHOP ON EARTHQUAKE MITIGATION CHECKLIST

Group 1

Areas of Concern	Already Established	Not Yet Established	Next Steps (Remarks)
1. Legal Framework		X	• **Council Resolution / EO / Ordinance for the creation of MCDCC** • **Require the secretariat (or request the Law Dept. / Office of the City Sec. DILG – Makati for a draft resolution / ordinance/EO immediately**
2. Legal Policy on Earthquake Mitigation		X	• **Council Resolution/EO/Ordinance for the creation of MCDCC** • **Require the secretariat (or request the Law Dept. / Office of the City Sec. DILG – Makati for a draft resolution / ordinance/EO immediately** • **Propose for the amendment of the amendment of the National Building Code specific for Highly Urbanized Cities like Makati City** • **Enforcement of Zoning Ordinance** • **Review of existing policies on structural designs within the hazard zone.**
3. Organization and Personnel	X		• **strengthen existing org.** • **institutionalize MCDCC** • **expand membership** • **establish linkages with NGOS/NGAs/PO/s (Rotary Clubs/PICE-Makati/ASEP/Safety Engrs.PCEMAC/Bldg. Administrators/ Makati Emegerncy Response Group/PCAM/MACEA and others)**
4. Definition and Roles and Responsibilities of Offices and Officials	X		• **ensure commitment of members** • **review current roles and responsibilities**
5. Plans and Programs	X		• **update current plans and programs (see attachment AIP 2004)** • **apply / implement applicable plans** • **preparation of long term plans for disaster mitigation** • **ensuring the return/maintain of the quality of life**

			• study on the economic impact and protection
6. Earthquake Disaster Alert Program		X	• Review existing disaster alert program • Prepare Earthquake Disaster Alert Program • Development/adopt of possible warning indicators • increase/enhance public awareness • formulation of Communication Plan
7. Earthquake Disaster Evacuation Plan		X	• review existing disaster evacuation plan • prepare earthquake evacuation plan(site inventory, resources etc.) • benchmark with other cities, organizations, companies etc.
8. Earthquake Disaster Recovery Plan			• review existing disaster evacuation plan • prepare earthquake evacuation plan(site inventory, resources etc.) • benchmark with other cities, organizations, companies • linkages with other emergency support groups • ensure security of the area
9. Earthquake Disaster Management Reporting System		X	• review existing disaster management reporting system • prepare earthquake disaster management reporting system • benchmark with other cities, organizations and companies • linkages with other emergency support groups • involvement of tri-media • utilization of information communication technology such as makati websites/internet/intranet • establishment/development of more Barangay Computer Centers as mode of information access (BOMS/GIS-MAP System) • institutionalize the reporting system • strengthen monitoring and evaluation system
10. Earthquake Disaster Management and Information Technology	X		• utilization of information communication technology such as makati websites/internet/intranet • establishment/development of more Barangay Computer Centers as mode of information access (BOMS/GIS-MAP System) • enhancement of public awareness through ICT • implementation of the Makati Computerization Program (Priority 2) includes GIS • Conduct of Seismic Hazard Assessment and Mapping • Benchmark with other countries, cities organizations and

				companies
11.	Earthquake Disaster Management Training Programs and Policies	BARELY WE HAVE		• Policy on the Application structural Seismic load factor eg. High rise bldgs. • Policy on reconstruction of collapsed bldgs. On same site • Human resources development eg. Trainings • publish training information program • consider in the review of the Comprehensive Land Use Plan the inclusion of Hazard Zones • review existing training programs and policies • standardization of trainings • benchmark with cities, organization and companies • establish linkages with training institutions
12.	Public Education and Community Awareness Program on Earthquake	X		• review existing program • customize information system (youth, households, ofc. Workers etc. • involve the cooperation and support of various NGOs/NGAs/POs etc. • include in the curriculum of the public education program • benchmark and observe best practices with other cities, organization and companies
13.	Manual on Earthquake Mitigation		X	• to review proposed handbook • observe best practices
14.	Budget for Disaster Management	X		• rationalize budget for disaster management programs • utilization of the appropriated budget • implementation of programs based on the approved budget • inclusion in the AIP and CIP
15.	Earthquake Disaster Management Performance Audit	X		• Review existing performance audit system • Perform regular audit • Review of level disaster preparedness - barangay
16.	Community Based Disaster Mitigation	X		• review existing community based disaster management system & review of disaster barangay level preparedness
17.	Inter Local Disaster Cooperation Agreement		X	• linkages with adjacent LGUs (multi-forum) • linkages with LGUs outside of Metro Manila (regional scope) • linkages with NGOs/NGAs/Pos etc. • establish cooperation and partnership with LGUs (sharing resources)

18.	**Inventory of Disaster Tools**	**X**		• **review and upgrade of existing disaster tools** • **acquisition of additional tools** • **linkage with construction firms and developers**
19.	**Inventory of City Resources**	**X**		• **Sources of Funds** **City Funds** **5% calamity Funds** **20 % Development Fund (IRA)** **Special Project Fund** **Congressional Allocation (CDF)** **National sponsored programs** **NGO/PO/NGA** **Funding Agencies such as WB, ADB** **Development Agencies such as JICA, CIDA, AusAide, Red Cross and Red Crescent Society (ICRC), ADPC and UNDP/OFDA-USAID other International Organizations** • **Human Resource** **Professional Associations** **International expertise Skilled workers** **AFP-DRTG** **MMDA/MMDCC**

WORKSHOP ON EARTHQUAKE MITIGATION CHECKLIST

Group 2

DEPARTMENT	TASK	CAPABILITIES	RESOURCE AVAILABLE	RECOMMENDATION
CLUSTER I				
PNP	**Securing the Perimeter, Affected**	**Manpower augmentation**	**Patrol cars equipped with communication equipment**	**Additional and possible upgrading of rescue vehicles and communication equipment**
MAPSA	**Damaged Areas**	**Availability of MEMMS**	**Ambulance (3-OSMAK) (2 MHD)**	
HEALTH DEPT.	**Control of Traffic flow**	**High Angle Rescue**	**Medical Support vehicle (1)**	**Personnel in need of Protective gears**
OSMAK	**Protecting Private Properties**	**Vehicular Accidents**	**Medical and Trauma supply**	**Blood letting program – in case of major disaster**
RESCUE	**Immediate Medical Assistance**	**Fire, Water Rescue**	**Support vehicles (2) Portable radios hydrolic tools**	**Mutual agreement with other hospitals and clinics (Govt and Private)**
BUREAU OF FIRE PROTECTION	**Facilitate Transport of Vehicles**	**Collapsed structure rescue (CSSR)**	**K-9 Unit (3 dogs being trained for search and rescue) Barangay Resources**	**Mutual agreement with NGOs and Volunteer Group**
ENGINEERING	**Immediate Engineering Assistance**	**Manpower and augmentation**	**Buses**	**Upgrading & Maintenance of Equipment**
DISTRICT 1	**Provision of Transportation**	**Availability of Transport and other equipment**	**Heavy Equipment**	**Mutual agreement with private contractors/developers**
DISTRICT 2	**Vehicles**	**Construction of Infrastructure**	**Construction tools and equipment**	
EQUIPMENT DIV.	**Setting up of Temporary shelter** **Clearing of Debris**		**Dump trucks**	

DES	**Provide temporary utilities (i.e. Water electricity etc.)**		**(Please see attached inventory of equipment)**	
MSWD and Barangay	**Provision of Basic Services** **Identify inventory of Victims and Survivors** **Management of evacuation Centers** **Establish NGO / Media Desk Information**	**Manpower** **Networking capability and resource mobilization** **Trained personnel providing psychological intervention (stress management)** **Barangay Volunteers**	**Stock pile of basic needs (Food Supply)** **Cooking Equipments** **Communication system and equipment** **Indigenous materials/ tools available in the community**	**Upgrading of equipments** **Limited protective gears** **Availability of relief goods during major disaster (Emergency purchase)** **Continuous training program**

Areas of Concern	Already Established	Not Yet Established	Next Steps (Remarks)
1. Evacuation Plan	❖ **Identified open spaces for evacuation** **Dist. 1 (Gov. – 2/ Private – 4)** **Dist. 2 (Giv. – 2 / Private – 0)** ❖ **Communication** ❖ **Verification** ❖ **Assessment – extent and gravity of damage** ❖ **Mobilization of all Response Unit** ❖ **ID of safe route** ❖ **Evacuation** **- Temporary Shelter**		**Additional Areas (Declared Safe)** **Utilization of Open Courts (Gov. and Private)** **Village Parks can be utilized in mass evacuation** **Identify building evacuation plan (Blue prints care of building officials)** **Inventory of Tenants and Personnel** **Resource Mobilization**
2. Recovery Plan	❖ **Damage Appraisal** ❖ **Medical Triaging** ❖ **Food Supply** ❖ **Social Service** ❖ **Stress management** ❖ **Continuous search and recovery**		**Availability of Medical Supplies** **Availability of Baisc Needs (Food, Water, Clothing, etc.)** **Availability of long term recovery program for funding** **Financial assistance to victims**

	❖ On site inspection ❖ Clearing ❖ Construction of permanent/ temporary shelter ❖ Mobilization of volunteers, i.e. health workers, maintenance ❖ Reporting of damage utilities		Identification of a long term on site / off site relocation areas

WORKSHOP ON EARTHQUAKE MITIGATION CHECKLIST

Group 3

Key Area of Concern	Objective	ACTION PLAN	Agency In Charge
EARTHQUAKE DISASTER ALERT PROGRAMS	**To gather a complete and accurate information for effective and efficient response**	**1. Conduct periodical inspections @** **a. Buildings** **b. Residential** **c. Commercial i.e. gas stations** **d. Bridges**	**DEPW** **FIRE DEPT** **LIGA NG BRGY.**
		2. Account Local resources **a. Medical infrastructure facilities i.e hospitals lying in clinics, health centers, private clinics** **b. Fire hydrants/ Deepwells Artesian wells** **c. Fire response logistics** **d. Specialized disaster utilities** **e. Manpower identify Prof/ skilled workers** **f. Communication systems (including radio station)** **g. Perishable and other survival goods**	**OFFICE OF THE MAYOR** **FIRE** **PNP** **DEPW** **MAKATI RESCUE** **MSWD** **MAC** **LIGA NG BRGY.** **UDD**
		3. Identify and account all danger zones	**LIGA NG BRGY** **PNP** **DEPW** **MAC** **MAKATI TASK FORCE ON RESETTLEMENT**
		4. Enforce securing of safety permits for: **a. Transient services** **:Gas tanker trucks** **:LPG delivery trucks** **:Toxic chemical delivery vans**	

EARTHQUAKE DISASTER MANAGEMENT TRAINING PROGRAMS AND POLICIES	**To improve the MDCC, BDCC and the CBDM volunteer group's response to disaster and provide the needed measures to regain their functionality**	**1. Conduct continuous updated training for:** **a. MDCC** **BDCC**	**OFFICE OF THE MAYOR** **PNP-TRAFFIC** **MAPSA** **LIGA NG BRGY** **MSWD** **DEPW** **UDD**
		2. Conduct training for community volunteers as Community Based First responders	
		3. Conduct training for building and establishment owners and employees on earthquake and fire response	
PUBLIC EDUCATION AND COMMUNITY AWARENESS PROGRAM ON EARTHQUAKE	**To build-in conditioned responses of the community to earthquake scenarios and similar situations**	**1. Periodical conduct simulation drills @** **a. Schools** **b. Commercial establishments** **Hotels** **Gas stations** **c. Government offices**	**OM** **FIRE DEPT.** **PNP** **MSWD** **MAPSA**
EARTHQUAKE MANAGEMENT REPORTING SYSTEM	**To formulate a reporting system that would also lead to an efficient evaluation and assessment information for future planning**	**1. Conduct post critique activities of the MDCC's disaster response** **2. Formulate a digital evaluation system for fast assessment** **3. Update the report forms of the MDCC and the BDCC**	**All members of the MDC and the BDCC**
COMMUNITY BASED DISASTER MITIGATION	**To encourage the participation of community based volunteer groups, NGOs and NGAs as networks in disaster response**	**1. Conduct an inter-agency meeting with all NGOs and NGAs that has a capacity to respond to disaster situations** **2. Organize more community based volunteer groups**	**All members of the MDCC and the BDCC** **NGO's and NGA's**

Area of Concern	Established	Not yet Established	Steps to take to establish what are lacking
EARTHQUAKE DISASTER ALERT PROGRAM	**Partially established**	**This is not yet established as ther is no technology that would appropriate this need** **However, the MDCC follows a standard operating procedure manual that would guide the tem during and after earthquake situations**	
EARTHQUAKE DISASTER MANAGEMENT REPORTING SYSTEM	**The City Government Council and the Makati City Disaster Coordinating Council has already formulate a standard operating Procedure manual that would define the roles and responsibilities of each key agencies specifically in reporting, evaluating and assessment**		**There is a need to digitize the procedures for past delivery of information and establish an instant response to disaster situations**
EARTHQUAKE DISASTER MANAGEMENT AND TRAINIGN PROGRAM	**ESTABLISHED**		**There is a need to update the technology and knowledge of the members in IT**
PUBLIC EDUCATION AND COMMUNITY AWARENESS PROGRAM IN EARTHQUAKE	**ESTABLISHED**		
COMMUNITY BASED DISASTER MITIGATION	**ESTABLISHED**		**There is a need to optimise the participation of community based volunteer groups, NGO and NGA**

Group Members

Efren G. Ariet Jr.	MSSD
SFO4 Anthony Gray	Fire
Eugenio C. Rosario	Sn Antonio
Leonardo T. Biñegas	Urdaneta
Lourdes V. Francisco	Comm. Section – UDD
Wilmore C. Moredo	Educ.
Joselito B. Banate	Educ.

APPENDIX 5 – SAMPLE PAGE FROM EQUIPMENT INVENTORY

INVENTORY OF MAKATI RESCUE EQUIPMENT
OFFICE : MAKATI YOUTH CENTER BLDG.
AS OF: JUNE, 2002 / JUNE 2003
HYDRAULIC EXTRICATION EQUIPMENT

QUAN-TITY	UNIT	NAME AND DESCRIPTION	SERIAL NO.	PROPERTY NO.	DATE ACQUIRED	REMARK
1	**Unit**	**Spreader type LSP 40B (Lukas Brand)**	**01043184**	**29657**	**8-29-96**	**Serviceable**
1	**Unit**	**Spreader type LSP100(Lukas Brand)**	**PN630**	**29658**	**8-28-96**	**Serviceable**
1	**Unit**	**Cutter type LS 300B(Lukas Brand)**	**01040748**	**29660**	**- do -**	**Serviceable**
1	**Unit**	**Accu-tool, type LS300B (Lukas Brand)**	**0104352501**	**29661**	**- do -**	**Serviceable**
1	**Unit**	**Unitool, type LKS500 (Lukas Brand)**	**0104061112**	**29656**	**- do -**	**Serviceable**
1	**Unit**	**Telescopic Rescue Ram, type LTR 6/570 (Lukas Brand)**	**01043154**	**29659**	**- do -**	**Serviceable**
1	**Unit**	**Handpumps, type ZPH1/1 (Lukas Brand)**	**45319032-8**	**29662**	**- do -**	**Serviceable**
1	**Unit**	**Motor pumps, GS-2T w/Briggs and Straton Motor no. 123152 (Lukas Brand)**	**010422844**	**29664**	**- do -**	**Serviceable**
1	**Unit**	**Motor pumps, GS-2R w/Briggs and Straton Motor no. 123154 (Lukas Brand)**	**1014267-8**	**29663**	**- do -**	**Serviceable**
1	**Unit**	**Single hose reel, type ESH-20 (Lukas Brand)**	**01041691**	**29665**	**- do -**	**Serviceable**
1	**Unit**	**Cutter, type LS 300C (Lukas Brand)**	**01042620**	**29666**	**- do -**	**Serviceable**
1	**Pc**	**Lifting Bag, Model LHK 31 (small)**		**29655**	**- do -**	**Serviceable**
1	**Pc**	**Lifting Bag, Model LHK 68 (big)**			**- do -**	**Serviceable**
1	**Unit**	**Control Panel w/ Deadman Function (Lukas Brand)**	**010405436**	**29667**	**- do -**	**Serviceable**
1	**Unit**	**Pressure Reducer w/ supply Hose w/ order no.84150 & 9301**	**40316621**		**- do -**	**Serviceable**
1	**Pc**	**Inflation Hose 10 mtrs. Color red (Lukas Brand) order no. 84150/9303**	**01041735**		**- do -**	**Serviceable**
1	**Pc**	**Inflation Hose 10 mtrs. Color yellow (Lukas Brand) order no. 84150/9317**	**01034988**	**01034988**	**- do -**	**Serviceable**
7	**Pairs**	**Fire Bunker Suit**			**2000**	**Serviceable**
11	**Pcs.**	**Fire Bullard Helmet**			**- do -**	**1 Loss**
12	**Pairs**	**Fire Dex Gloves**			**- do -**	**Serviceable**
1	**Unit**	**Glass Remover WSC**			**1996**	**Serviceable**
4	**Pcs**	**Glass Remover Blade**			**1996**	**On Stock**
10	**Pcs**	**Masito/ Iron Mallet**			**2000**	**Serviceable**
9	**Pcs**	**Maso/Iron Mallet**			**- do -**	**Serviceable**
3	**Pcs**	**Axe**			**- do -**	**Serviceable**
1	**Set**	**Lukas Mobile Power Pack consisting**			**5-15-2003**	**Serviceable**

		of LKS 20 EN + 100 Battery Power Pack complete w/ battery charger and harness				
11	**Set**	**Lukas Cutter and Door Opener Set w/hose line and hand pump in carrying case**			**5-15-2003**	**Serviceable**
1	**Set**	**Lukas ISV – Manifold Valve complete w/ couplings**			**- do -**	**Serviceable**
1	**Set**	**Lukas Super Silent Power Pack C-4TB complete w/ coupling**			**- do -**	**Serviceable**
1	**Set**	**Lukas 3-Stage Telescopic Ram type LTR 3.5/820**			**- do -**	**Serviceable**
1	**Set**	**Lukas Spreading Wedge SP91**			**- do -**	**Serviceable**
1	**Unit**	**Lukas Rescue Platformtype LPT1**			**- do -**	**Serviceable**
1	**Unit**	**Lukas Single Acting Flat Cylinder Model Fkz 30/16 rated 309 KN**			**- do -**	**Serviceable**

- ***OVERALL QUANTITY OF EXTRICATION EQUIPMENT = 92***
- ***ACTUAL QUANTITY OF EXTRICATION EQUIPMENT SERVICEABLE = 87***
- ***TOTAL QUANTITY OF EXTRICATION EQUIPMENT STOCK = 4***
- ***TOTAL QUANTITY OF EXTRICATION EQUIPMENT LOSS = 1***

APPENDIX 6
Workshop on Emergency Response Program

Seminar Workshop on Emergency Response
Makati City Hall
November 13-14, 2003

November 13, 2003

8:30 - 9:00 am	Welcome Remarks	-***Mr. Nicanor V. Santiago, Jr.*** City Administrator Vice-Chairman Makati Disaster Coordinating Council
9:00 – 9:30 am	Background of the September 25-26, 2003 Workshop on Checklist of Mitigation Requirements	-***Dr. G. C. Sosmeña, Jr.*** Institutional Consultant, MMEIRS
9:30 – 10:00 am	Progress after September 25-26 in Formulating the Makati Master Plan on Disaster	-***Colonel Victor Pagulayan*** Consultant, Makati Disaster Coordinating Council
10:00 – 10:15 am	Break	
10:15 – 11:15 am	Presentation of Work Group Reports	-Work Group Chairs
11:15 – 12:00 nn	Presentation of purpose and objectives of a workshop on Emergency Response	-***Ms. Shirley Mattingly*** Institutional Consultant, MMEIRS
12:00 -1:30 pm	Lunch break	
1:30 – 3:00 pm	Workshop I*	-Work Group Chairs
3:00 – 3:15 pm	Break	
3:15 – 4:45 pm	Workshop II	

November 14, 2003

9:00 – 10:00am	Work Group Progress Report	-Session Moderator
10:00-10:15 am	Break	
10:15 - 12:00 nn	Workshop III	
12:00 – 1:30 pm	Lunch Break	
1:30 – 3:00 pm	Presentation of Group Reports in Plenary Session	-Session Moderator
3:00 – 3:30 pm	Closing Remarks	-***Colonel Victor Pagulayan***

*Workshops I-III continues up to 12:00 noon of 14 November 2003

APPENDIX 7
Emergency Response Pocket Guide Outline

Contents

The contents of the pocket guide should be determined by the needs of each user group; elements may be added or deleted based on the organization or city/municipality choosing to adopt and adapt it for its own use. The model guide produced by the MMEIRS Project includes the following elements as described below.

Annotated Outline

22. Table of Contents

23. Emergency telephone numbers / key contact information

    List the telephone numbers and/or other contact information of persons and organizations which can be useful in an emergency, such as key city officials and departments, fire, police, schools, utilities, hospitals, barangay offices, etc.

24. Introduction

    What the pocket guide is
    Who it is for
    How to use it

25. Operational priorities in case of emergency

    List operational priorities (priorities to guide operational forces in responding to the disaster situation) as determined by the organization or LGU. They might include:
    - Protecting life (highest priority), property, and the environment
    - Meeting the immediate emergency needs of people, including rescue, medical care, food, shelter, and clothing
    - Temporarily restoring facilities that are essential to the health, safety, and welfare of people (such as medical, sanitation, water, electricity, and emergency road repair)
    - Meeting the rehabilitation needs of people, including temporary housing and employment
    - Mitigating hazards that pose a threat to life, property, and the environment

26. Local organization for disaster management

27. Incident Command System (ICS) and command structure

28. Communications, alert and warning

29. Check lists of responsibilities and actions during disaster
    For the mayor, DCC members, barangay captain, etc.
    How to carry out their responsibilities

30. Information checklist for decision-making during disaster

What a public official needs to know; the questions to ask

31. Situation and needs assessment
    Process and reporting formats for immediate assessment
    Rapid visual inspection of damaged structures

32. Disaster Operations Center (DOC)
    Activation
    Staffing
    Operations

33. Multi-agency coordination and utual aid
    Mutual aid is the progressive mobilization of resources to and from emergency response agencies and local governments with the intent of providing adequate resources to agencies requesting them. Procedures should be established for requesting resources and coordinating their deployment and response.

34. Evacuation procedures

35. Medical aid and assistance

36. Emergency public information

37. Recovery

38. Employee emergency responsibilities
    During normal working hours
    Outside normal working hours

39. Employee preparedness
    Home/family preparedness
    Before, during, and after the disaster

40. Public officials' emergency kit

41. Key provisions of the City Disaster Management Ordinance

42. Sources and references

EMERGENCY RESPONSE POCKET GUIDE[1]:

[1] This Guide was produced in collaboration with the City of Makati as part of the Earthquake Impact Reduction Study for Metropolitan Manila (MMEIRS), a joint project of the Japan International Cooperation Agency (JICA), Metropolitan Manila Development Authority (MMDA), and Philippine Institute of Volcanology and Seismology (PHIVOLCS). Local governments and other institutions are welcome to adapt city-specific sections to their needs and publish the Guide while crediting the MMEIRS Study.

EMERGENCY TELEPHONE INFORMATION

List of telephone numbers and/or other contact information of key persons and organizations which can be useful in an emergency, such as:

- *Key city officials and departments*
- *Barangay officers and offices*
- *MMDA and OCD communications centers*
- *Other key governmental entities e.g. fire, police, schools*
- *Other resources, e.g. utilities, local hospitals, key private entities and NGOs*

Sample Format

PERSONNEL NAME	**CONTACT NOS.**			**AGENCY / OFFICE**
	Cell Phone	**Office**	**Residence**	
				City Mayor
				City Vice Mayor
				City Administrator
				City Engineer
				Disaster Officer
				Chief of Police

INTRODUCTION

This **Emergency Response Pocket Guide** is a handy compilation of important and relevant information on disaster preparedness and management in the City. It is aimed to serve as a useful and ready reference for the different member-agencies of the City Disaster Coordinating Council (CDCC) to enable them to function efficiently and effectively before, during and after any natural or man-made calamity.

So far, the city has been spared of disastrous events that go beyond the CDCC's present capabilities. However, its proximity to the 'valley fault' poses the unseen yet very real threat of a strong earthquake similar in magnitude to the July 1990 earthquake in Baguio City. And with the onslaught of terrorism in this part of the world, the threat of terrorist attacks like bombings in crowded public places has intensified. Given these 'clear and present' dangers, the CDCC members need to constantly prime themselves on the most effective and appropriate ways to combat them.

This booklet contains vital information, such as emergency contact numbers, checklists of key personnel and their respective duties, and procedural guidelines for various aspects of operations (i.e., evacuation, rescue, public information, communications, etc.), among others. Readers are urged to look up the Table of Contents for faster access to desired sections.

OPERATIONAL PRIORITIES IN CASE OF EMERGENCY

The General Objective is: "To prevent or minimize loss of life, damage to property and alleviate needless sufferings."

The Operational Priorities are:

1. Protecting life (highest priority), property, and the environment
2. Meeting the immediate emergency needs of people, including rescue, medical care, food, shelter, and clothing
3. Provision, operation and maintenance of a continuous and reliable warning system throughout the period before, during, and after calamities
4. Temporarily restoring facilities that are essential to the health, safety, and welfare of people (such as medical, sanitation, water, electricity, and emergency road network)
5. Meeting the rehabilitation needs of people (temporary housing, transportation, and employment)
6. Mitigating hazards that pose a threat to life, property, and the environment
7. Providing for the protection, use and distribution of resources to maximize their effectiveness

LOCAL ORGANIZATION FOR DISASTER MANAGEMENT
(MAKATI CITY)

DUTIES AND FUNCTIONS OF CITY OFFICIALS IN DISASTER MANAGEMENT

❑ City Mayor

- ❖ The Mayor is the head of the City Disaster Management Office
- ❖ Provides the overall leadership in planning for disaster mitigation
- ❖ Ensures the proper coordination being carried out with the MMDCC, other cities, other levels of government and non-governmental organizations.

❑ Vice-Mayor

- ❖ In the absence from the city or disability rendering the Mayor unable to act as the Head of the City Disaster Management Office, the Vice-Mayor will exercise the duties of the City Mayor.

❑ Sangguniang Panlungsod

- ❖ Appropriates calamity fund for local calamities and Disaster Preparedness Plan in the annual budget.
- ❖ Provides early warning on the approach of tropical cyclones and other disasters for the residents to undertake necessary measures to avoid loss of life and injuries

Operation Center Support Staff

❑ Makati City Disaster Coordinating Council (MCDCC)

- ❖ Public awareness education of the residents on the nature of disasters and corresponding measures to negate its negative effects to city through seminars and media publication
- ❖ Provides early warning on the approach of tropical cyclones and other disasters for the residents to undertake necessary measures to avoid loss of life and injuries
- ❖ Provides training and orientation to disaster personnel to upgrade their skills and techniques relative to disaster preparedness such as first-aid, cardio vascular resuscitation, fire-fighting techniques, disaster rescue and other disaster management programs
- ❖ Prepares contingency plans to address possible threats to the city.
- ❖ Organizes Disaster units and assigning responsibilities towards the delivery of adequate services
- ❖ Provides technical advice and assistance to the barangays and to interested people on the field of disaster management

❑ Makati Social Welfare Department

- ❖ Provides relief assistance in terms of food, clothing and sheltering to victims of natural and man-made disasters
- ❖ Coordinates with BDCCs in preparing evacuation centers
- ❖ Conducts rehabilitation of disaster victims when needed

❑ Makati Rescue

- ❖ Provides life-sustaining services to victims of natural and man-made disasters and other emergencies
- ❖ Undertakes search and rescue and retrieval of victims on incidents requiring disaster response such as on drowning incidents, collapsed of structures, vehicular collisions, fire incidents and others
- ❖ Undertakes clearing and paneling operations using the K-9 unit on malls, place of entertainment, hotels and in areas where suspected packages need to be examined
- ❖ Provides training on First-Aid and CPR, rappelling and other skills and techniques on rescue upon request of interested parties

❑ Makati Fire Department

- ❖ Provides seminars and orientation on fire management
- ❖ Conducts fire drills
- ❖ Inspects establishments on fire safety
- ❖ Trains members of Volunteer Fire Brigade
- ❖ Delivers water to areas where there is inadequate water supply
- ❖ Conducts fire fighting and fire suppression activities

❑ Makati Health Department and Ospital ng Makati

- ❖ Analysis of water potability of water stations
- ❖ Provision of medical assistance to victims of natural and man-made disasters
- ❖ Medical evacuation of disaster victims to hospitals
- ❖ Prevention on the occurrence of communicable diseases
- ❖ Conducts periodic inspection of evacuation centers and treat sick and injured victims

- **Finance Department**
  - Conducts inventory and monitor its finances and other resources intended for disaster to ensure that the plans for disaster mitigation can be implemented
- **Budget Department**
  - Shall program funds to implement disaster management program in addition to the calamity fund
- **Department of Engineering and Public Works**
  - Inventory of road network and ensure the proper maintenance of city roads and streets
  - Identifies alternative roads necessary to transport materials and supplies into the city
  - Strict implementation of the building code and conduct periodic inspection of buildings
  - Provides transportation for the movement of disaster personnel and relief goods
  - Assists rescue units in the conduct of rescue operations when called upon
  - Provides other disaster measures such as flood preventions and other mitigation programs to reduce the vulnerability of the city against disasters
  - Establishes linkages with contractors, developers and owners of heavy equipment who can provide assistance during disaster or emergencies
- **General Services Department**
  - Assists in ferrying of personnel, relief goods and medical supplies
- **MAPSA/Makati Police**
  - Provides traffic management during disasters to ensure the smooth flow of vehicles and movement of people
  - Provides security on disaster stricken areas to safeguard the residents and other properties
  - Monitors food supply and arrest unwarranted increase in price of prime commodities
- **Liga ng mga Barangay**
  - Ensures that communication facilities are operational for issuance of alert notices and warnings during the approach of typhoons and other weather disturbances
  - Transmits to the chairman, through the secretariat, disaster reports obtained by the BDCCs

- **Barangay Disaster Coordinating Council**

  - Evacuation of people from areas threatened by disasters to safe sites such as the multi-purpose covered courts and other public buildings
  - Assists the City Disaster Council on the implementation of disaster management programs especially on disaster preparedness of their constituents
  - Assist DEPW and GSD in clearing of water channels
  - Assists the police and MAPSA in the supervision of traffic
  - Ensures communication equipment are operational

- **Other City officials and employees**

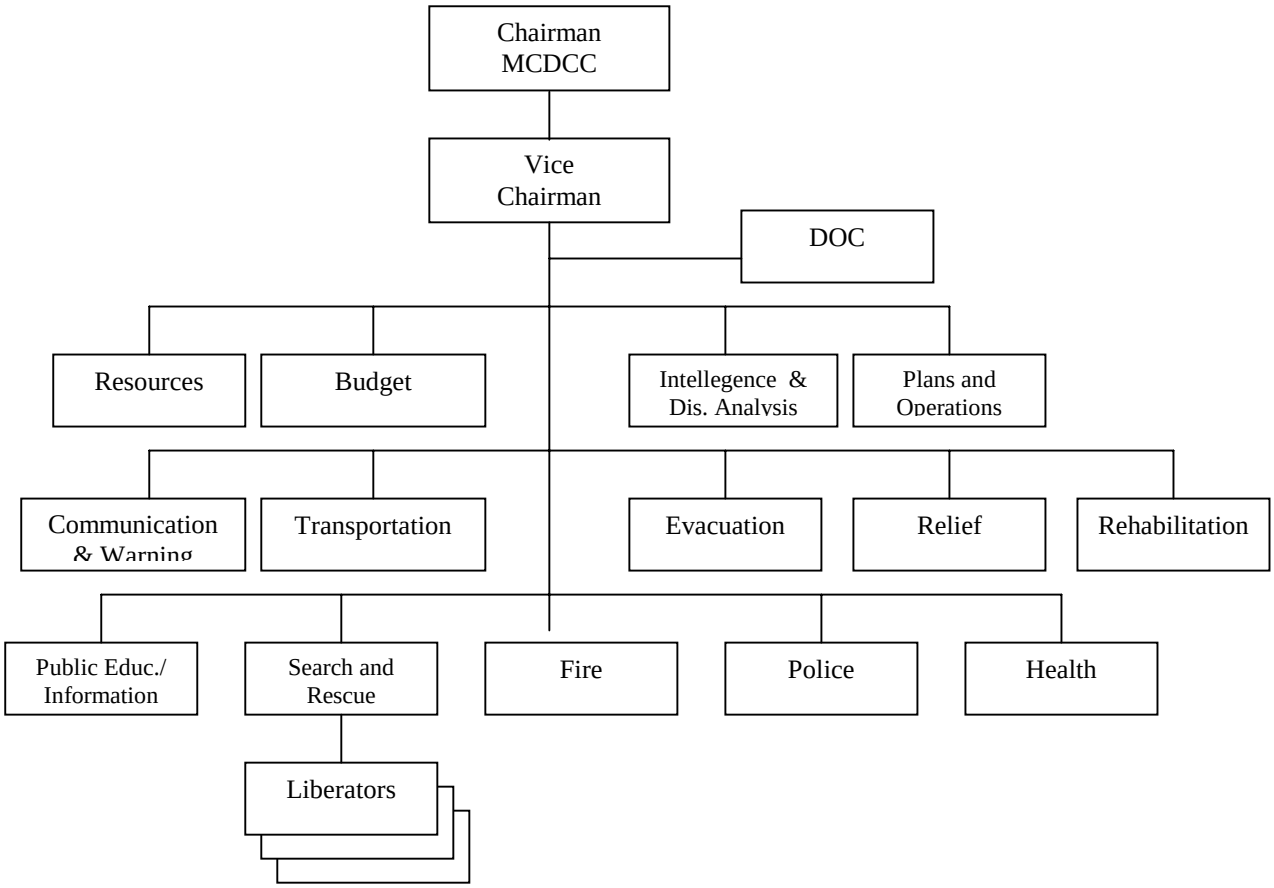
  - Render all possible assistance they provide to the public

MAKATI DISASTER COORDINATING COUNCIL

Makati City Disaster Coordinating Council (MCDCC) is the disaster arm of the City Government. It undertakes Disaster Management to insure adequate and effective coordination of the various departments to provide efficient delivery of services to prevent loss life and alleviate needless sufferings during emergencies and disasters.

The Council is organized with ten (10) task units, four (4) staff elements and is chaired by the City Mayor and assisted by Vice-Chairmen.

The Council Organization is shown as follows:



Emergency or disaster response is undertaken by the respective task units depending upon their functional responsibilities.

The Disaster Council has resources (manpower and equipment) which are utilized during emergencies and disaster. These resources are: personnel from the Engineering Department, General Services, Environment and Sanitation, Public Safety, Fire, Health, Ospital Ng Makati and Makati Rescue and the operational vehicles, equipment and tools the disaster personnel utilize during emergencies on disasters.

INCIDENT COMMAND SYSTEM (ICS) AND COMMAND STRUCTURE

Incident Command System (ICS)

The Incident Command System provides a modular and expandable system for managing a disaster. Under ICS there are systematic planning and centralized management of response operations. And it is clear who is in charge.

Through ICS, multiple agencies and entities work together in a coordinated effort to facilitate decisions for overall emergency response, including the sharing of critical resources and prioritization of incidents

Concept of Operations

The following major components of ICS will form the basis for the City's field command structure:

Management
Operations
Planning/Intelligence
Logistics
Finance/Administration

City Policy regarding Use of the Incident Command System (Makati City)

The Council has enunciated a Crisis Management policy that intends to remove confusion and provide the employment of economy of forces (resources) thereby maximizing disaster response. Delineation of responsibilities under the Crisis Management policy is as follows:

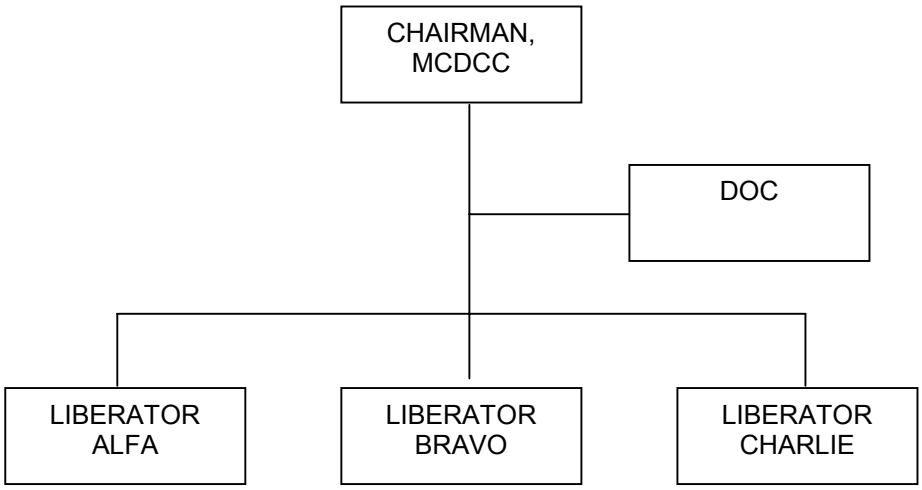
Threats of Bombing – Police is the lead agency supported by the Task Units of the MCDCC

Fire Events - Fire Department takes the lead with support from MCDCC

Collapsed Structures – Makati Rescue Units provide the disaster response supported by MCDCC

The Liberators

For collapsed structures there is a Task Force known as the Liberators. The force is organized as shown:



Each Liberator force (Alfa, Bravo, and Charlie) is organized in the following way:

- Commander
- Assistant Commander
- Extrication Unit
- Technical Unit

- Fire Fighting Unit
- Medical Unit
- Crowd Control and Securing Unit
- Extrication Relieving and Support Unit
- Debris Removal Unit
- Social Services

The Liberators as a Specialized Task Group is a composite organization with elements coming from the various agencies of the City Government. The Task Group will address the problems of searching, extricating and recovering persons trapped in buildings and other infrastructure which collapse due to the destructive effects of severe earthquakes and other natural or man-made disaster. Additionally, it will conduct search and rescue of persons carried away by floods in the inland waters of the city.

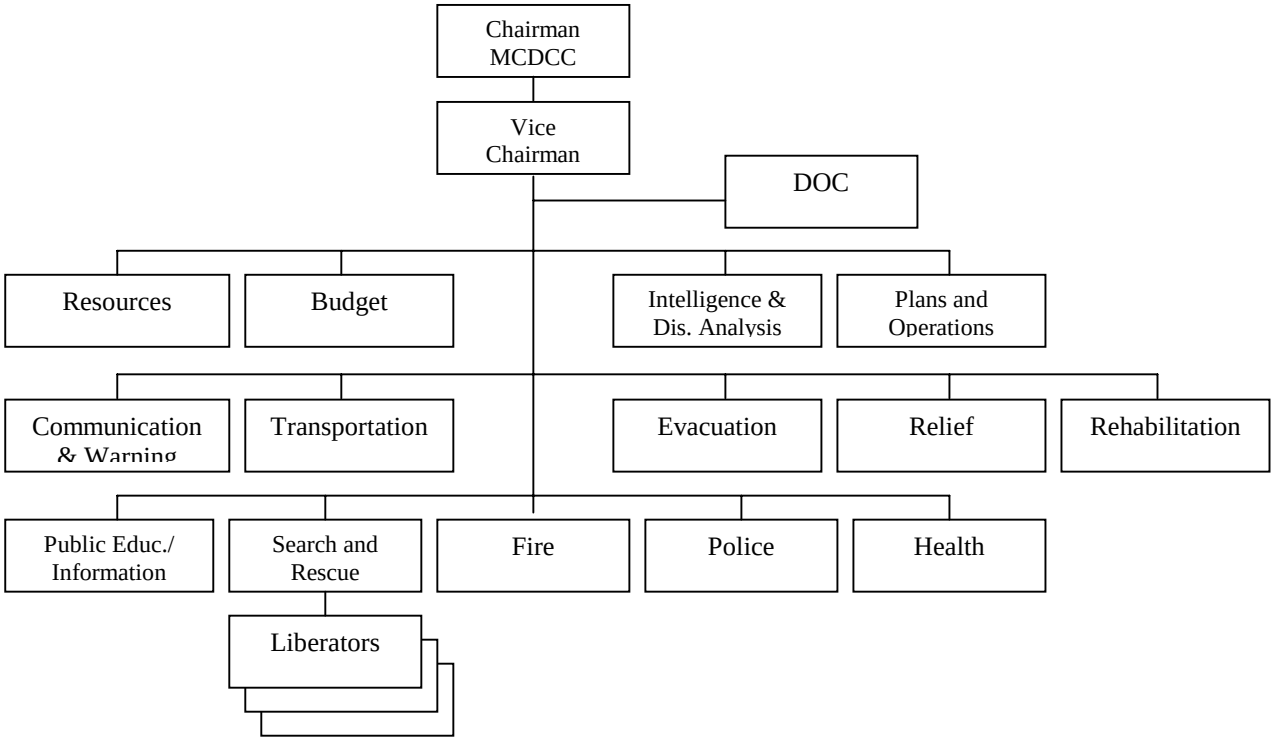
MISSION:

The mission of the Task Group is as follows:

- o Undertakes search, rescue and recovery operations of people trapped in collapsed building and other infrastructures or underneath debris during the occurrence of destructive earthquakes.
- o Undertakes search and rescue operations as directed for other natural and man-made calamities such as floods, fires and others.
- o Provides medical and other relief assistance to retrieved victims.

ORGANIZATION:

The Task Group shall be one of the TASK UNITS of the City Disaster Coordinating Council of the City of Makati under the City Mayor who is also the Chairman of the City Disaster Coordinating Council. The TASK GROUP as part of the Council's organization is depicted below:



TASKS AND RESPONSIBILITIES:

❑ Office of the Chairman

1. Establishes the Disaster Operations Center Command Post (DOCCP) in the disaster stricken area to facilities command and control of the operations.

2. Employs the Liberator Units in accordance with the extent of the disaster.

3. Monitors the on-going operations.

4. Calls for additional assistance/support of the AFP Units, Police, Fire Departments, Hospital, Private contractors and others.

5. Disseminates information on the situation to the media and the public.

6. Submits report to the higher DCC as called for.

❑ Liberator Commanders

1. Conducts damage assessment of the collapsed building in coordination with the Technical Elements and other Team Leaders.

2. Conducts clearing of debris to open ways to areas where victims are trapped.

3. Conducts retrieval operations.

4. Monitors activities of units under the Team Commander.

5. Reports to MCDCC-ACPDOC as often as necessary.

6. Recommends the termination of SAR operations.

❑ Liberator Assistant Commander

1. Takes over the responsibilities of the Commander in case the latter becomes incapacitated.

2. Coordinates with the Teams and other as directed

❑ Extrication Unit

1. Conducts search, rescue and recovery operations

2. Endorses the retrieved victims to the Medical Teams

3. Reports status of operations to the Liberator Commander

4. Continues SAR Operations until all victims have been retrieved

❑ Technical Elements

1. Assists in the assessment of the collapsed building to determine how to approach the building and clears ways to areas where victims are trapped

2. Provides technical assistance in the operations by using engineering methods in diggings, lifting, shorting, bridging and creating access through mechanical means

3. Provides transportation facilities, heavy equipment and other engineering equipment as needed

4. Reports to the Liberators Commander as necessary

❑ Fire-Fighting Unit

1. Initiates fire fighting should there be an outbreaks of fire

2. Conducts fire rescue if situation demands

3. Clears way for retrieval operations of the Extrication Unit

4. Clears the area of chemical spills, toxic and flammable materials to avoid occurrence of chains of unwanted events

5. Provides other assistance as needed

6. Reports to Liberator Commander as required

❑ Medical Unit

1. Provides medical assistance to retrieved victims

2. Establishes field hospital on the disaster site and evacuates serious victims to
3. hospitals

4. Accounts for and identifies disaster victims

5. Disposes of the dead victims as appropriate to the situation

6. Provides other medical assistance as necessary

7. Reports to Liberator Commander as called for

❑ Crowd Control and Security Unit

1. Maintains peace and order in the disaster site to prevent chaos and clears the area of unauthorized persons

2. Insures smooth flow of traffic within the disaster area

❑ Extrication Relieving and Support Unit

1. Supports Extrication Unit as directed
2. Relieves Extrication Unit when called for
3. Continues the conducts of SAR
4. Reports to the Commander as required
5. Assist in other tasks when so required

❑ Debris Removal Unit

1. Clears all debris to open ways for the retrieval operations
2. Utilizes heavy equipment in support of the clearing operations
3. Request assistance from other units when needed

❑ Social Services

1. Provides food assistance to members of the Task Group and other personnel of the CDCC
2. Provides tracing services for the disaster victims in coordination with the medical unit and the LIGA NG MGA BARANGAY (LIGA)
3. Provides other assistance when called for

COMMUNICATIONS, ALERT AND WARNING

Assumptions

In case of a major earthquake, governmental authorities require accurate and timely information on which to base their decisions and focus their response actions. However, widespread damage to commercial telecommunication facilities is likely to impair communications with the rest of the country and externally.

Initial reports of damage will be fragmented and provide an incomplete picture concerning the extent of damages, including damage to telecommunications facilities.

Policy

It is the City's policy to develop and maintain an efficient communications system which provides:

- Coverage both within and between organizations
- Primary reliance on existing systems
- Compatibility between organization's systems
- A dedicated radio frequency for control and coordination
- A back-up system in case of primary system failure
- A back-up power supply
- Simplicity of activation and operation

Concept of Operations

The initial focus will be to:

- Identify what telecommunications facilities and capabilities remain operational in the Metro Manila area
- Identify what telecommunications assets can be brought into the area
- Monitor the telecommunications companies' activities to restore services
- Inventory responding agency needs for telecommunications services
- Allocate available assets, such as radios and cellular phones, for priority needs such as damage assessment.

Checklist

- Inventory the availability and functionality of the following kinds of assets:
  - Mobile or transportable telecommunications equipment
  - Multi-channel radio systems
  - Base station and hand held portable radios
  - Mobile or transportable microwave systems
  - Trained installation and operations personnel available for deployment to the field
  - Naval ships or aircraft as platforms for radio repeaters
  - Amateur radio networks, systems and personnel

Public Warnings

A public warning is intended to bring about an appropriate response to avoid or minimize exposure to danger. Warning messages are one part of the public information system. They should:

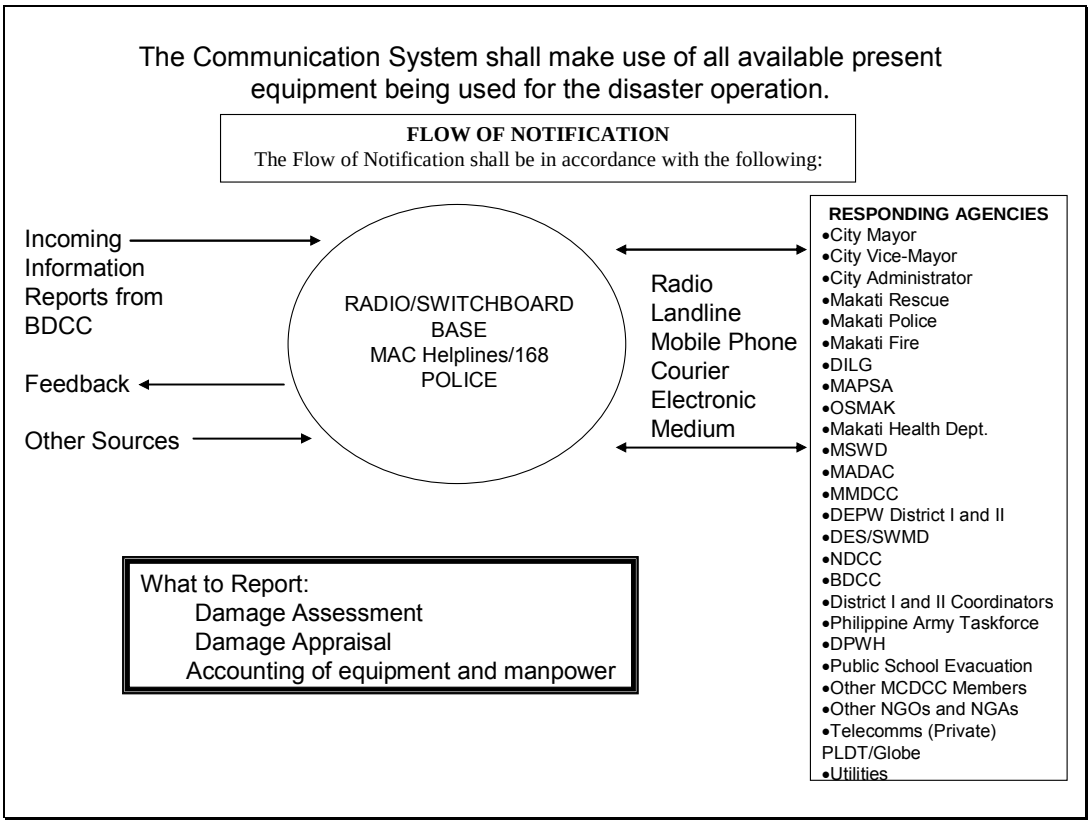
- Provide timely information about hazard
- State what action should be taken to reduce loss of life, injury and property damage
- State the consequences of not heeding the warning
- Provide feedback to decision-makers on the extent of public compliance
- Cite a credible authority
- Be short, simple and precise
- Have a personal context
- Contain active verbs
- Repeat important information regularly

Methods for disseminating the warning may include:

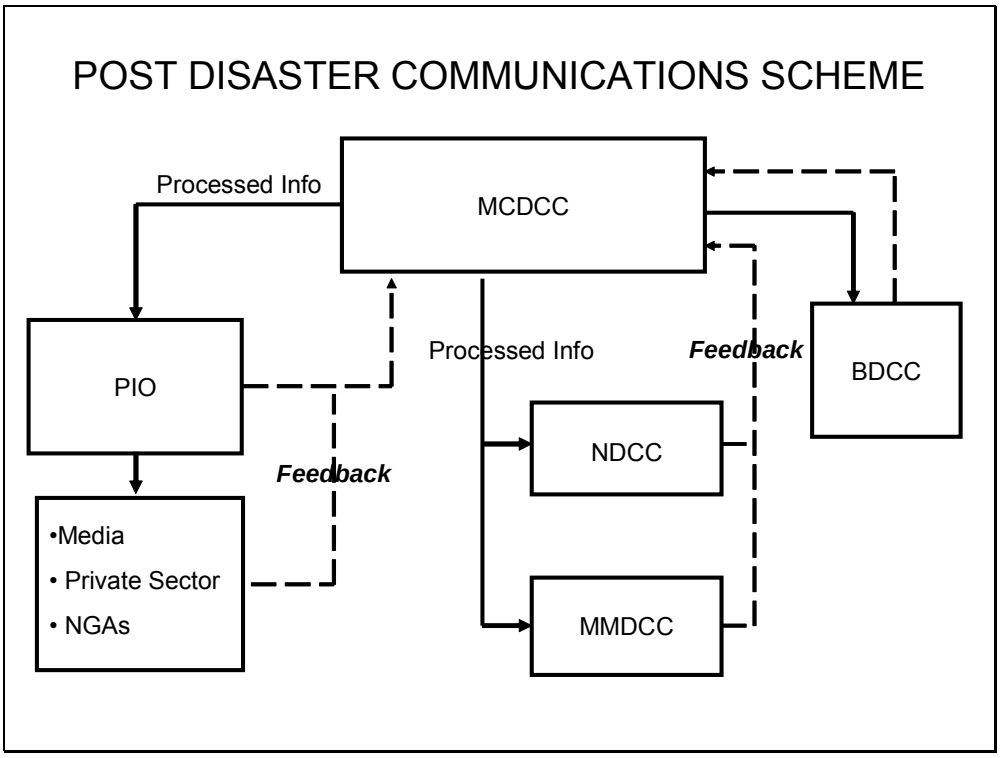
- Messages released through the media (radio, television, print)
- Knocking on doors
- Loudspeakers, sirens, gongs, or visual signals

Special consideration should be given to warning special needs groups such as the elderly, infirm and physically disabled.

NOTIFICATION AND ALERT SYSTEM (MAKATI CITY)

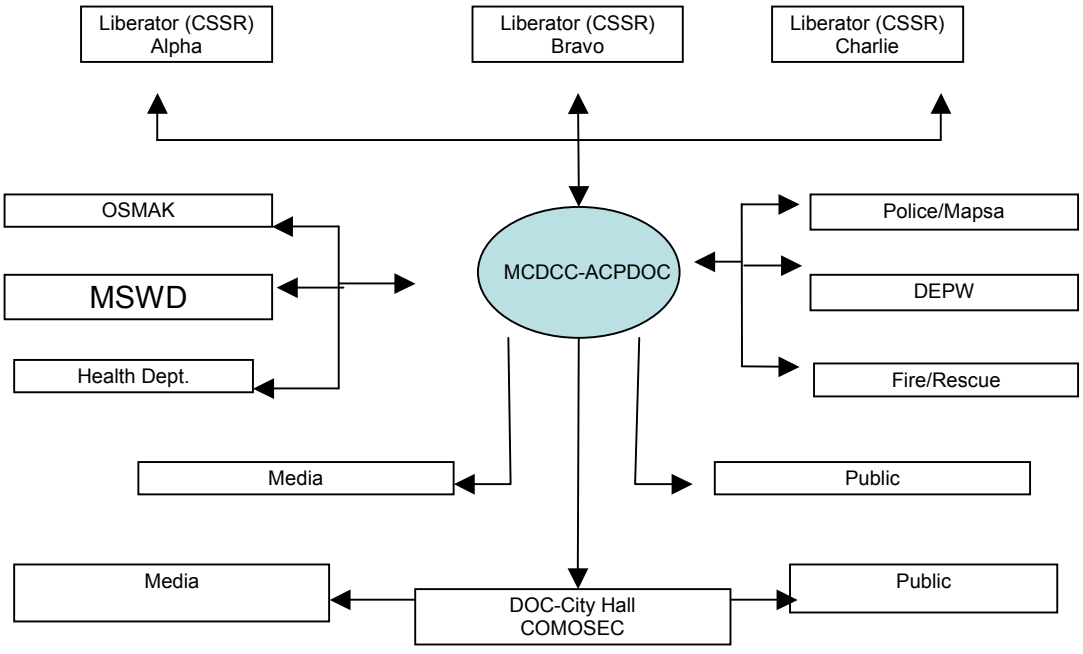


POST DISASTER COMMUNICATIONS SCHEME (MAKATI CITY)



COMMUNICATIONS NETWORK (MAKATI CITY)

COMMUNICATIONS NETWORK
(COLLAPSED STRUCTURE INCIDENT- MAKATI CITY)



Communications linkage with the operating units shall be through the respective radio communications to be set up by the unit representatives at the Advance Command Post (ACP).

Channels for Mobile Communications for Advance Command Post

- Radio
- Courier
- Telephone

Operations Procedures

Upon notification by Communication Sections (166/168) operator on the collapse of a building or other Search and Rescue Operations caused by other natural/man-made calamities, the chairman, MCDCC deploys the response unit/s as the situation demands and establishes when necessary, the MCDCC Advance Disaster Operations Center (MCDCC-ADOC) in the vicinity of the disaster site to be staffed by members of the Communication Section with MCDCC Coordinators.

CHECKLIST OF CITY DEPARTMENT RESPONSIBILITIES BEFORE, DURING, AND AFTER DISASTERS

(SAMPLE)

Policy

It is the policy of the City that all departments and agencies will provide immediate and efficient response to disasters.

Checklist of Responsibilities

City departments and agencies under the Mayor and Council's supervision are assigned the following major responsibilities. **All Departments** are responsible for:

Preparedness

- Develop and maintain its own emergency alert list of departmental employees
- Develop its own Standard Operating Procedures for emergencies, including mobilization, incident management, and communications
- Determine and prepare resources and equipment necessary for essential services in a disaster
- Train personnel assigned emergency functions in ICS and response operations

Response

- Alert personnel, mobilize resources, and implement emergency plans/procedures
- Coordinate response with other agencies and DOC
- Upon request, send agency representative to DOC
- Assess the extent of damage to department/agency property and report it to DOC

Recovery

- Provide personnel and equipment to support recovery functions
- Resume normal department operations as soon as possible

CHECKLIST OF ACTIONS DURING DISASTER – CITY DEPARTMENTS
(MAKATI CITY)

- Chairman (Mayor)
  - ✓ Activates council upon receipt of warning
  - ✓ Analyzes information and determines the extent of disaster and alerts appropriate response unit
  - ✓ Should disaster be widespread, the Mayor/Chairman activates MCDCC and determines courses of actions to take based on the assessment and issues appropriate orders to the responding units to take necessary actions
  - ✓ Reviews the inventory of available resources against projected number of victims or the extent of operations, including food items, medicines and supplies, clothing, transportation for rescue and evacuation, and ferrying of stranded commuters.

- Makati Rescue
  - ✓ Availability of personnel for deployment
  - ✓ Transport facilities for ferrying of search and rescue personnel and equipment
  - ✓ Availability of rescue equipment for use in SAR operations
  - ✓ Submit report as called for

- Dept. of Engineering and Public Works
  - ✓ Availability of engineering equipment for rescue of people in collapsed buildings
  - ✓ Coordinates with pumping stations of DPWH
  - ✓ Availability of transportation and other equipment for rescue and evacuation to position at the quadrangle

- Makati Health Department
  - ✓ Availability of first aid volunteers to render emergency medical care
  - ✓ Availability of medicines and supplies to be used during operations
  - ✓ Public hospitals and health clinics are alerted to receive injured and sick evacuees
  - ✓ Continuous surveillance of the evacuation centers to control outbreak of communicable diseases until evacuees return to their home

- Makati Social Welfare Department
  - ✓ Packaging of food items, clothing and other necessities
  - ✓ Prepositioning of cooking equipment for mass feeding if necessary
  - ✓ Preparation of evacuation centers
  - ✓ Coordinates with other agencies for the use of transportation and evacuation if needed
  - ✓ Provides assistance to families rendered homeless or suffered dead
  - ✓ Survey the disaster areas to determine the requirements for rehabilitation of public infrastructures
  - ✓ Coordinates with DEPW for undertaking the repairs or reconstruction
  - ✓ Coordinates the projected number of evacuees with disaster relief services to ensure adequate sheltering of evacuees

- Public Safety Department (MAPSA)
  - ✓ Activates the auxiliary units for immediate deployment to the disaster stricken areas
  - ✓ Pre-positions traffic aids and other auxiliaries along flood prone roads and at pre-determined choke points to maintain efficient flow of traffic
  - ✓ Assists in rescue and evacuation operations
  - ✓ Coordinates rescue and evacuation units stationed at Ft. Bonifacio and PNP Rescue Unit based at Bicutan

- Makati Fire Department
  - ✓ Makes available vehicles that can be utilized for rescue and evacuation
  - ✓ Assists in other disaster operations when needed

- Other task units continuously provide assistance to the disaster operations until their termination

CHECKLIST OF ACTIONS DURING DISASTER – CITY MAYOR

(SAMPLE)

Responsibilities

The Mayor is chairman of the Makati City Disaster Coordinating Council and is responsible for directing City actions to protect life and property in the event of a disaster. A disaster demands effective leadership, and decisions made early in a disaster often have far reaching consequences.

It is the Mayor's responsibility to:
- Ensure centralized direction and control
- Declare the existence of a local emergency
- Obtain resources necessary to protect life and property
- Ensure effective cooperation with other public agencies and the community

Checklist of Actions

Direction and control
- Oversee the activities of the City DCC and all City agencies in preparing, responding, and recovering from a disaster
- Declare a local emergency, as necessary
- Approve extraordinary expenditures, as required

Public information
- Designate a single Public Information Officer (and back-up)
- Monitor the media's capability to disseminate information during disaster
- Establish media center where media will be regularly updated
- Ensure all public information releases are released through the Mayor and DOC
- Ensure public information releases are coordinated with other jurisdictions and levels of government
- Establish a policy and schedule for news media updates and access

- Provide liaison with the media

Intergovernmental and community cooperation
- Coordinate with other entities and the PIO on release of official statements
- Oversee the coordination of requests for and provision of mutual aid (through the City Administrator)
- Consider establishing a business assistance center to be opened after a disaster to assist businesses to recover and reopen

CHECKLIST OF ACTIONS DURING DISASTER -- DISASTER ACTION OFFICER

(SAMPLE)

Responsibilities

The Disaster Action Officer (DAO) coordinates City disaster planning and preparedness. In a disaster, the DAO acts as a first responder, provides information and assistance to the Mayor and the City Disaster Coordinating Council (MCDCC), and manages the Disaster Operating Center (DOC).

Checklist

The first actions to be taken by the DAO are to:

- Notify the Mayor, City Administrator, and MMDA Communications Center of the occurrence of the event
- Activate the DOC and mobilize DOC staff
- Establish communications with key City officials; activate emergency alert list
- Activate Disaster Flash Reporting System

Throughout the disaster the DAO shall:

- Assist Mayor, City Administrator, and PIO in preparing and disseminating warnings, emergency public information, and recruitment of volunteers and additional staff
- Activate the DOC and ensure operating status of communications and other equipment
- Mobilize DOC staff and manage DOC operations
- Convene the MCDCC at the Mayor's request and provide staff support
- Provide liaison to MMDCC, other NCR agencies and LGUs, private sector, etc.
- Assist with damage and needs assessment

CHECKLIST OF ACTIONS DURING DISASTER – CITY ADMINISTRATOR

(SAMPLE)

- Supervise damage and needs assessment processes

- Supervise analysis of financial impact in the City

  - Assess City's cash situation
  - Develop short and long-term financial strategies
  - Monitor cash flow; identify available sources in departmental and other funds
  - Track extraordinary expenditures
  - Advise departments on availability of emergency funds
  - Oversee preparation of emergency contracts for personal services, supplies and equipment

- Oversee release of public information, if so assigned by the Mayor

- Oversee the securing of alternate City worksites, if needed

- Coordinate requests for and provision of mutual aid assistance

- Assist the Mayor and Council with recovery and reconstruction issues
  - Oversee preparation of recovery plans by City departments
  - Oversee preparation of emergency ordinances and mitigation measures

CHECKLIST OF ACTIONS DURING DISASTER --PUBLIC INFORMATION OFFICER (PIO): See Public Information Section

INFORMATION CHECKLIST FOR DECISION-MAKING DURING DISASTERS

Purpose: To assist in decision-making in an emergency.

As the situation evolves, this information must be updated.

Basic data and incident profile

- What (type of disaster)
- When (date and time of occurrence)
- Where (exact locations)
- Why (probable cause)
- Who (affected population and responding agencies)
- How (how is the response being carried out)

Needs assessment

Is there a need for:

____ Search and rescue assistance? (yes/no)
____ Evacuation assistance?
____ Transportation assistance?
____

Analysis of the Incident

____ What is the problem?
____ Where is the problem?
____ Where is the problem going?
____ What is in the problem's way?
____ When will the problem get there?

Response considerations

____ What can be done?
____ How will it be done?
____ When will it be done?
____ Who will get it done?
____ Who will pay for getting it done?

SITUATION AND NEEDS ASSESSMENT

Procedures are to be developed for immediate assessment of the situation following a disaster, including reporting formats and instructions. Included will be a:

- Disaster Flash Report (to be submitted within 1 hour by the local DCC chairman)
- Rapid Damage and Needs Assessment Checklist (to be submitted within 6 hours)
- Damage Assessment Form (to be submitted within 12 hours)

The procedures should address the following questions:

- Who performs the assessments?
- Who compiles the reports?
- Where are they sent and how?
- How is feedback provided, especially on requests for assistance?
- How often are reports updated?

In addition, a process for rapid visual inspection and safety assessment of damaged structures should be developed, also including reporting formats and instructions and addressing the following questions:

- Who is responsible for safety evaluation of critical facilities?
- Who is authorized to restrict access to damaged buildings?
- How will it be enforced?

In the interim, the following reporting format may be utilized for the Rapid Assessment (within 6 hours) and transmitted to the DOC.

ADDITIONAL INPUTS FOR
ITEM NO. 13
DAMAGE AND NEEDS ASSESSMENT

- **RAPID ASSESSMENT CHECKLIST THAT CAN BE SUBMITTED WITHIN 6 HOURS**

- **DAMAGE ASSESSMENT FORM THAT CAN BE SUBMITTED WITHIN 12 HOURS**

RAPID SITUATION ASSESSMENT CHECKLIST

NAME OF BUILDING/STRUCTURE: _____
LOCATION: _____ AS OF: _____

Please check __Institutional __ Residential __ Commercial
__ Building

COMPONENT	SAFE	UNSAFE	EXTENT	REMARKS
STRUCTURAL				
ELECTRICAL				
SANITARY/ PLUMBING				

PUBLIC STRUCTURES

ROADS/ HIGHWAYS				
1.				
2.				
3.				
4.				
BRIDGES/ FLYOVERS				
1.				
2.				
3.				
4.				
RAILWAYS				
OTHERS				

ASSESSMENT OFFICER _____

HUMAN DAMAGE ASSESSMENT
LOCATION: _____
DATE: _____

NO. OF PERSONS WOUNDED ____
NO. OF CONSCIOUS PERSONS ____
NO. OF INDIVIDUALS WITH BREATHING DIFFICULTY ____
NO. PERSONS WITH CHEST PAIN ____
NO. OF PERSONS W/ ONE-SIDED BODY WEAKNESS ____
NO. OF PERSONS WITH SEIZURE ____
FRACTURES ____

NO. OF ATTENDING MEDICAL PERSONNEL ____
NO. OF ATTENDING SOCIAL WORKERS ____
NO. OF SECURITY PERSONNEL ____
NO. OF COMMUNICATIONS PERSONNEL ____
LIST OF AVAILABLE RESOURCES:
COMMUNICATIONS
1.
2.
3.
MEDICAL FACILITIES
1.
2.
3.
VEHICLES
1.
2.
3.
FOOD
1.
2.
3.
WATER SUPPLY
1.
2.
3.
OTHERS

DISASTER OPERATIONS CENTER (DOC)

Concept of Operations

It is the City's policy to provide for multi-agency coordination and processing and sharing of information primarily through the DOC. The DOC is for coordination; tactical decisions are made by incident commanders in the field. The (designated site) is currently designated as the City's primary DOC.

Responsibilities

The Disaster Action Officer is responsible for maintaining and activating the DOC. The Disaster Action Officer will run the DOC under the supervision of the City Administrator. The DOC will provide updated disaster information to the Public Information Officer for release to the media and the public.

Staffing of the DOC will be provided by involved City departments.

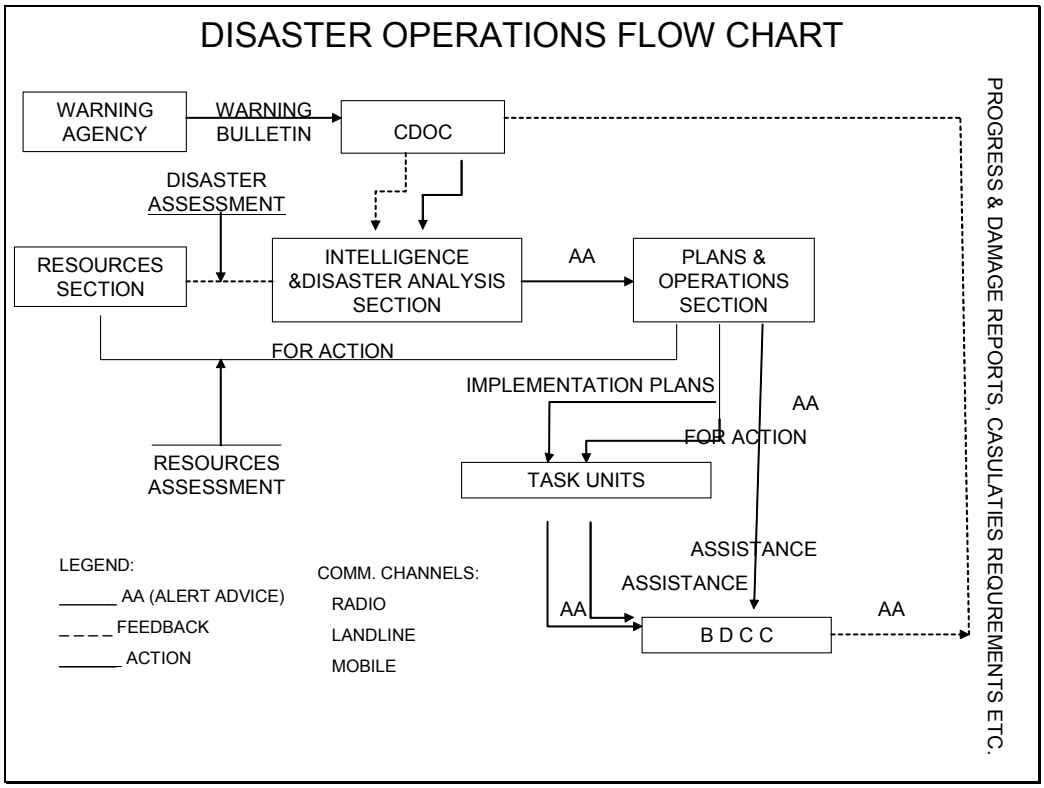
Checklist

Activating the DOC
- Open the DOC
- Call out staff
- Open communications systems
- Prepare display boards and maps
- Prepare staff roster

DOC operating procedures should provide for:
- Message flow
- Information display
- Information processing
- Resource deployment
- Preparing situation reports
- Preparing media bulletins
- Decision-making
- Information briefings

Deactivating the DOC
- File messages and records
- Clean display boards and maps
- Stand down staff
- Close communications systems
- Debrief staff and prepare after-action report

INFORMATION FLOW -- DISASTER OPERATIONS CENTER (MAKATI CITY)



MULTI-AGENCY COORDINATION AND MUTUAL AID

Multi-Agency Coordination

Multi-agency or inter-agency coordination is the participation of agencies and entities working together in a coordinated effort to facilitate decisions for overall emergency response, including the sharing of critical resources and prioritization of incidents.

Multi-agency coordination is established under **Presidential Decree 1566** and the **National Calamities and Disaster Preparedness Plan.** PD 1566 provides that self-reliance shall be developed by promoting and encouraging the spirit of self-help and mutual assistance among local officials and their constituents. The mentioned Plan provides coordinating instructions to agencies and LGUs.

Military Forces

The Armed Forces of the Philippines has organized its Disaster Response Task Force to strengthen disaster response and relief operations. The highest local official in the stricken area shall request the corresponding military authorities for assistance when the situation is beyond his control.

Mutual Aid

Mutual aid is support rendered by one jurisdiction to another during declared emergencies. The purpose of mutual aid is to provide personnel and logistical support to meet the immediate requirements of an emergency situation, when the resources normally available to that jurisdiction or agency are insufficient.

Mutual aid assistance provided to or by the City will be made in accordance with national laws and policies, City ordinance, and the mutual aid assistance program.

Responsibilities

Each agency/department with disaster response/relief responsibilities shall develop mutual aid procedures in cooperation with corresponding agencies under the supervision of the City Administrator and with the assistance of the Disaster Action Officer.

Mutual aid agreements among cities and with the Philippine National Red Cross and other non-governmental organizations will be supervised by the Mayor.

EVACUATION PROCEDURES

Policy

The City will provide for orderly and rapid evacuation of any part of the City's population if it is determined to be the most effective available means of protecting them from a disaster. A mandatory evacuation may be ordered by the Mayor or Incident Commander and enforced by police or other authorized personnel.

Evacuation Stages

Warning → withdrawal from the area → shelter → reunion with family members → return

Concept of Operations

Evacuation planning requires identification of:
- sites suitable as assembly areas
- sites suitable as evacuation centers
- evacuation routes between the assembly and evacuation areas
- organizations responsible for conducting and assisting with the evacuation
- registration teams and supporting information management systems
- arranging and coordinating transport
- operating evacuation centers and organizing victim services

Executing an evacuation order requires coordination with all of the above services as well as the MMDA and surrounding local government units.

Responsibilities

The following may have responsibilities regarding evacuations:
- Mayor and Incident Commander – ordering and overseeing the evacuation

- Disaster Operations Center (DOC) – coordinating all agencies
- Public Information Officer (PIO) – advising the public
- Department of Engineering and Public Works – evacuation routes and transportation
- Department of Social Services – provision of services to victims
- BDCCs – coordination with local officials and victims

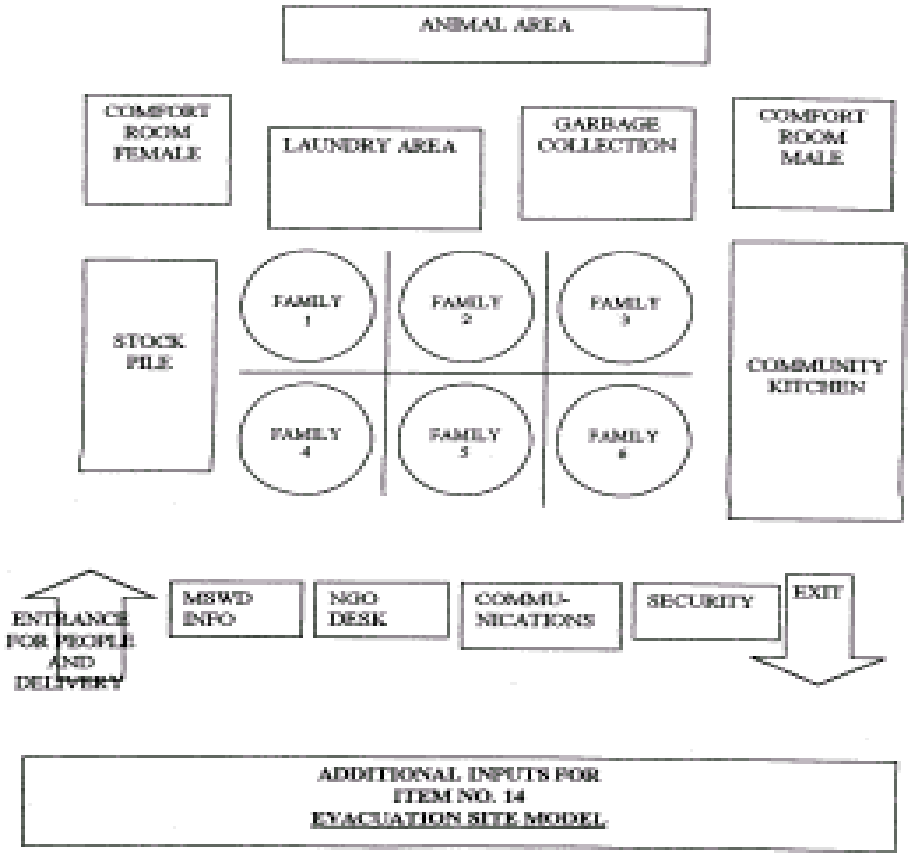
Evacuation Center Checklist

- Safe evacuation routes, access and egress
- Potable water source
- Medicines/medical facilities
- Food and cooking supplies
- Portalets
- Communication facilities
- Clothes
- Security
- Generator or alternative power supply
- Registration

Evacuation Center Staffing Roster (for 100 evacuees)

Evacuation leader -- 1
Medical team – 10
Social worker – 10
Security personnel – 20
Driver – 2
NGO representative – 2
Communication staff – 2

EVACUATION SITE MODEL
(MAKATI CITY)



MEDICAL AID AND ASSISTANCE

Purpose

Medical management in disasters aims to provide the greatest benefit for the largest number of casualties in order to reduce mortality and morbidity within the affected population and return to a routine health care situation as soon as possible.

Checklist of Functions

- Provisions for a field hospital
  Establish field hospital for triage and treatment services for patient stabilization. Mobilize and dispatch mobile hospital capable of conducting minor surgical and clinical needs.

- Assessment of health and medical needs
  Mobilize and deploy to the disaster area an assessment team to determine specific medical and health needs and priorities.

- Medical care personnel
  Provide disaster medical assistance teams to provide care for ill or injured victims; provide triage, medical or surgical stabilization; specialized teams can address mass burn injuries, pediatric trauma, etc. Military medical units can be deployed as well as individual clinical health and medical care specialists.

- Health/medical equipment and supplies
  Provide and monitor the need for restocking of equipment and supplies including pharmaceutical, biologic products, blood, etc.

- Patient evacuation and distribution
  Provide for movement of seriously ill or injured patients to locations where definitive medical care is available, using whatever transportation means is available.

- Worker health and safety
  Monitor health and well-being of emergency workers.

- Mental health
  Assess mental health needs; provide mental health training materials and training to disaster workers; address worker stress issues and needs.

- Public health information
  Provide public health and disease and injury control and prevention information that can be transmitted to the general public.

- Victim identification and mortuary services
  Provide victim identification and mortuary services, temporary morgue facilities, identification through latent fingerprint, forensic dental, and other methods; arrange for disposition of remains.

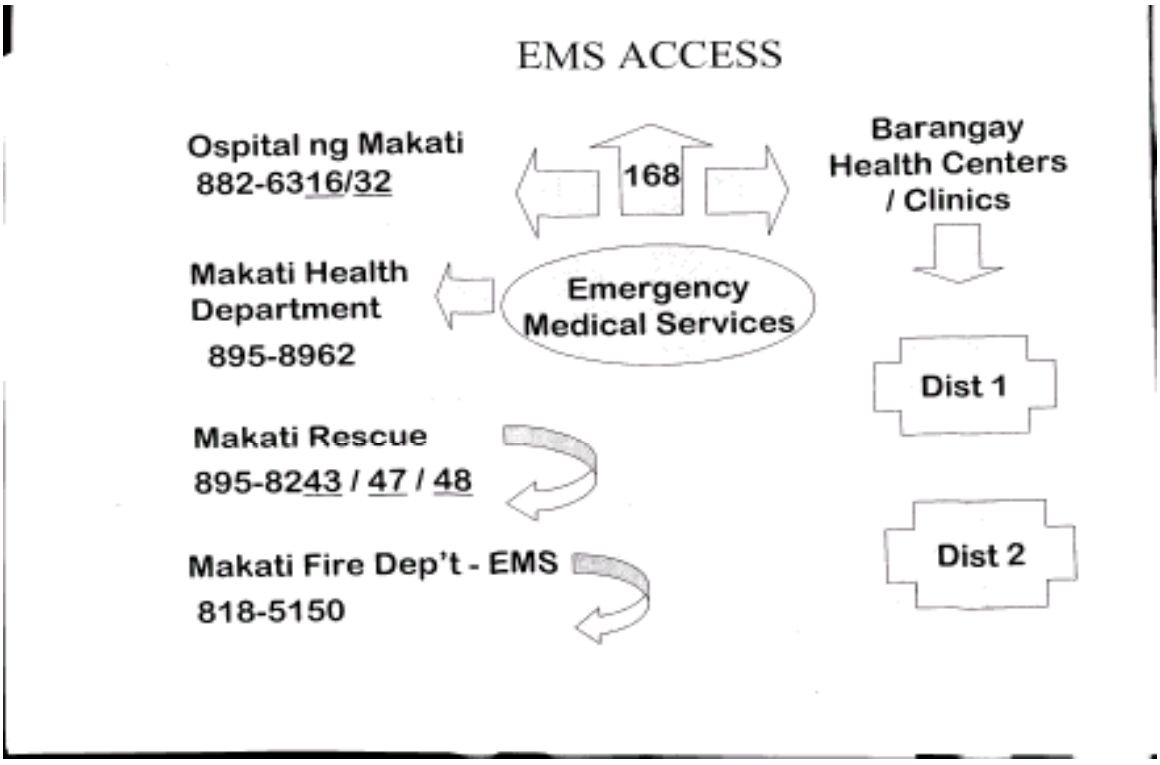
Mass Casualty Incidents also require:

- Establishing an on-scene medical command post with a single individual in charge of all medical operations
- Coordinating response team efforts
- Patient triage, holding, and treatment areas
- Ambulance dispatch
- Coordination with receiving hospitals
- Communications procedures for responding medical units

Checklist of Responsibilities (Makati City)

- The Makati Emergency Medical Services System has prime responsibility for facilitating, coordinating and supervising operations in a mass casualty situation
- The Emergency Department of Ospital ng Makati serves as pilot agency in mobilizing and facilitating proper flow of medical services
- The Makati Health Department plays an essential role
- Community health centers in the barangays provide extension services
- Makati Rescue unit and Makati Fire-EMS unit provide emergency medical technicial services

EMS ACCESS (MAKATI CITY)



EMERGENCY PUBLIC INFORMATION

Purpose

Typically one of the biggest challenges in a disaster is keeping the public adequately and correctly informed. In a disaster, the media will perform an essential role in providing emergency instructions and up-to-date information to the public. However, loss of power, communications capabilities, or broadcasting or transmitting facilities, some media may be off the air.

Policy

It is City policy to provide complete and accurate information, to cooperate fully with the media, and to create an atmosphere conducive to participation by the media in all phases of disaster management.

Fundamentals for Effective Public Information

Emergency public information should meet the following criteria:

- Available in a timely manner
- Accurate content
- Appropriate as to level of detail
- Clear and understandable to recipients
- Culturally appropriate to the recipients, e.g. rural or urban, etc.
- Easily accessible
- Two-way dialogue and feedback
- Authority and credibility of the communicator

Checklist of Actions for Mayor/Chief Executive

- Designate a single Public Information Officer

  The PIO should be a senior official able to speak for the Mayor and all agencies involved in the disaster response. The person should be experienced in dealing with the media and familiar with the city's response plans and procedures. One or two back-ups should also have these skills in case the primary PIO is not available.

  While a single PIO can handle most emergency situations, in a large disaster there may also be need for:
  - An on-scene public information team, and/or
  - An emergency information and rumor control team at the DOC

- Monitor the media's capability to disseminate information during disaster
- Establish a media center where the media will be regularly updated
- Ensure all public information releases are channeled through the Mayor and DOC
- Coordinate public information releases with other jurisdictions and levels of government
- Establish a policy and schedule for news media updates and access

Checklist of Actions for the Public Information Officer (PIO)

- Develop capability to rapidly release emergency instructions and information through all available means
- Maintain up-to-date listing of media resources and contact information
- Determine if the Mayor or incident commander has placed any limitations on releasing information
- Serve as point of contact for the media and other organizations
- Receive calls from the media and public and respond with official information
- Obtain reports or situation summaries from the DOC
- Prepare news releases and materials for use in media briefings
- Advise the media of the time and location of briefings
- Conduct situation briefings for media as appropriate
- Conduct tours of affected area, when and as appropriate
- Deploy on-scene public information team as appropriate
- Establish a field media center, if appropriate
- Coordinate with PIOs from other jurisdictions and levels of government
- Arrange interviews with key personnel (when requested by media and when it will not interfere with response operations)
- Arrange tours for media when requested and it will not interfere with response operations
- Obtain information from the media that may be useful to response operations

Preparation and Issuance of Public Warnings (See COMMUNICATIONS, ALERT AND WARNING Section)

A public warning is intended to bring about an appropriate response by the public to avoid or minimize exposure to danger.

RECOVERY
(MAKATI CITY)

Purpose

In the aftermath of disaster, citizens and businesses will need:
- Assessment of the extent and severity of damages to homes and other property
- Restoration of public services and utilities including water, electricity, communications, and transportation
- Repair of damaged homes and property
- Professional counseling for mental anguish and inability to cope

Short term recovery operations begin during response to the disaster and include: rapid debris removal and cleanup, restoration of essential services including medical and transportation, and re-establishment of standard governmental operations. For the longer term, recovery focuses on enhanced social and health services, re-establishing the local economy, reconstruction and rehabilitation of damaged structures, improving land use planning and mitigating against future disasters.

Policy

It is the City policy to prioritize the acceleration of recovery of individuals as well as public property in disaster stricken areas by making use of all available resources.

Concept of Operations

- Accounting and stockpiling of resources and equipment that will be directly used for recovery
- The continuous provision of basic needs necessary for recovery
- Assessment and official report of total damages for formulation of restoration plan
- Debris clearing and other activities under the rehabilitation and restoration plan
- Provision of psycho-social intervention, i.e. stress management

Responsibilities

The Makati Disaster Coordinating Council, chaired by the City Mayor, will be responsible for direct oversight of recovery and rehabilitation operations. They will be directly assisted by:

City Council
Engineering Department
MAPSA
UDD-Communications Section
BDCC
City Treasurer's Office
Budget Department
MSWD
Health Department
OSMAK
Housing

Checklist of Major Functions

- Estimate the total damage and collapsed structures including appraisals and cost for reconstruction or restoration (Note: The group recommends to make use of the ATC-20 Assessment from California for detailed assessment and reporting of damage and safety status.)
- Determine the financial and other resources for recovery operations
- Identify total human damage and provision of resources for their rehabilitation including medical, psycho-social, health, sanitation, etc.
- Conduct information dissemination
- Clear and dispose of debris and other obstructions
- Activate alternative technical resources
- Conduct community reorganization
- Prepare and implement the recovery master plan

EMPLOYEE EMERGENCY RESPONSIBILITIES

When a disaster strikes the City, every city employee can be called upon to assist in responding, regardless of whether they work in public safety positions.

During normal working hours

All City employees, after ensuring the safety of their families, shall report for work to make themselves available for disaster relief, and each department general manager is responsible to ensure that their employees do so.

Outside normal working hours

After ensuring that their families are safe, City employees with emergency roles shall respond according to their department's established procedures.

All other employees are expected to listen to local radio news broadcasts and comply with any instructions given for City employees. In general, they are expected to report to work at their normally scheduled time unless they are informed otherwise.

Note: The above policy will be stated in an Executive Directive.

EMPLOYEE PREPAREDNESS

Before the Emergency

Make sure your family knows what to do, where to go, and how to cope if you are not with them.

Reduce hazards in your home, e.g. items that would fall in an earthquake. Keep fire extinguishers handy and charged.

Attend first aid and cardiopulmonary resuscitation (CPR) classes.

Develop a **survival kit** for your home, workplace, and vehicles. Emergency clothing and these items should be stored in a safe, easily accessible place. The kit should include:

- Non-perishable food
- Bottled water
- Flashlight with spare batteries
- Radio with spare batteries
- Ziplock bags, toilet tissues
- First aid kit
- Critical medication
- Blanket
- Cash
- Coins for the telephone
- Small tool kit
- Candles and matches
- Shoes—flat, preferably hard soled
- Pants—sturdy material
- Head cover—hard hats, hoods on jackets, hats
- Gloves—sturdy, preferably leather
- Jacket—should provide protection from wind and weather

During the Emergency

Stay calm. Think before you act. Use common sense. Protect yourself from falling objects and debris. Help others. If an evacuation is ordered, go calmly. Do not use the elevator in case of fire or earthquake.

After the Emergency

Help anyone who is injured. Do not use the telephone unless emergency help is needed. **Refer to Mayor's Executive Directive.** In the following days and weeks, expect you and your family to experience various disaster effects such as sleeplessness, fatigue, anger, sadness, and other signs of stress, and seek treatment.

PUBLIC OFFICIAL'S EMERGENCY KIT

Purpose

Public officials must react immediately in case of a major disaster. The Mayor and other City executives should keep on hand a kit of useful items as listed below.

Contents

Information
- Emergency response pocket guide or checklists of responsibilities
- Emergency contact lists and telephone numbers

Supplies
- Notebook or log book
- Tape recorder
- Pens or pencils

Identification
- Identifying armband or vest
- Government-issued ID card with photograph and title

Clothing
- Raincoat or windbreaker
- Comfortable shoes or boots

Also useful
- Flashlight with extra batteries and bulb
- Cellular or mobile phone
- Portable 2-way radio with extra batteries
- Camera or video recorder
- Protective clothing (hard hat, boots, work gloves)
- Change of clothing
- Personal comfort items (high energy snack foods, aspirin, etc.)

Tips
Keep it simple and small.
Test your kit during exercises.
Encourage others to have their own kit.

Key Provisions of the City Disaster Management Ordinance

Section 11. Declaration and Termination of Local Disaster as Emergency

The Mayor is hereby empowered to declare the existence of a local disaster or emergency in accordance with the circumstances as outlined in Section 2. The declaration shall be in writing and shall take effect immediately. The declaration shall be transmitted immediately to the MMDCC, the Sangguniang Panlungsod, the public and others as appropriate through the most expeditious means.

Similarly, upon the recommendation of the City Mayor, a resolution can be promulgated by the Sangguniang Panlungsod declaring a disaster stricken area under State of Calamity in accordance with the provisions of RA 8185.

The Mayor or a designated city authority can terminate the State of Emergency of a disaster stricken area when the conditions warrant.

Section 21. Private Liability

It shall be unlawful for any person who willfully obstruct, hinder or delay any emergency services, enforcement of any rule or regulation issued pursuant to this ordinance, or who will perform any act forbidden by any rule or regulation under this ordinance.

It shall likewise be unlawful for any person to wear, carry or display an emblem, insignia or other means of identification as a member of any city emergency services or groups unless authority has been granted by the proper officials of the city. Violations of these provisions are subject to fines, penalties or imprisonment as may be provided by law.

Section 22. Penalty

Any person who will intentionally or willfully violate any provisions of this ordinance shall be punished with a fine to be determined or at the discretion of the Sangguniang Panlungsod.

Sources and References

The organizers of this Guide gratefully acknowledge the following sources and references which have been adapted herein for use by local governments and organizations in Metro Manila. We take responsibility for any misinterpretation of intent or content.

City of Los Angeles, Emergency Operations Master Plan and Procedures, 1996.

City of Los Angeles, Emergency Operations Organization Handbook, undated.

Federal Emergency Management Agency, The Federal Response Plan, 1992.

Federal Emergency Management Agency, The CEO's Disaster Survival Kit: A Common-Sense Guide for Local Government Chief Executive Officers, undated.

Governor's Office of Emergency Services, State of California, Emergency Planning Guidance for Local Government, Volume 2 – Model City Plan, 1998.

Natural Disasters Organisation, Australian Emergency Manual: Community Emergency Planning Guide, 2nd Edition, Australia, 1992.

4. Guide for Managing Information Concerning Disasters

GUIDE FOR MANAGING INFORMATION CONCERNING DISASTERS[1]

Table of Contents

[1] This Guide was produced in collaboration with the City of Makati as part of the Earthquake Impact Reduction Study for Metropolitan Manila (MMEIRS), a joint project of the Japan International Cooperation Agency (JICA), Metropolitan Manila Development Authority (MMDA), and Philippine Institute of Volcanology and Seismology (PHIVOLCS). Local governments and other institutions are welcome to adapt city-specific sections to their needs and publish the Guide while crediting the MMEIRS Study.

I. Introduction

Typically one of the biggest challenges in a disaster is keeping the public adequately and correctly informed. It is essential that all levels of the government provide clear, factual information to meet emergency public information needs. In a disaster such as major earthquake, it is expected that most normal means of communications in the affected areas will be interrupted or largely incapacitated.

This guide has been developed to provide guidance to Local Governments and institutions on appropriate policies and actions they should take to ensure the public receives accurate and timely information concerning how they can protect themselves from earthquake and other disaster impacts.

II. Background

The Philippines faces a continuous threat from various natural, man-made, and technological hazards which can result in loss of life and extreme damage to the built and natural environment. Metro Manila, as the National Capital Region and hub of business and commerce, is especially at risk due to the concentration of population and built environment.

The Metro Manila Earthquake Impact Reduction Study (MMEIRS) has been conducted during 2002-2004 by a Study Team including the Metro Manila Development Authority (MMDA) and the Philippine Institute of Volcanology and Seismology (PHIVOLCS). At a MMEIRS stakeholder workshop held in August 2003, the need for a guide to assist local governments in managing information concerning disasters was identified as a high priority. This guide has been developed in response to that need.

III. Assumptions

During periods of emergency, the public needs detailed information on how to protect themselves and their property. As earthquakes strike without warning, the public must be made aware of proper survival and response measures before the event as well as in its immediate aftermath.

In a disaster, the media will perform an essential role in providing emergency instructions and up-to-date information to the public. However, due to loss of power, communications capabilities, or broadcasting or transmitting facilities, some media may be off the air for hours or even days after the quake.

IV. Policy

It is recommended that cities, municipalities, and institutions adopt appropriate policies regarding the release of information to the public and their relationship with the media during emergency and non-emergency times. One example of such policies is stated below.

It is the City's policy to provide complete and accurate information, to cooperate fully with the media, and to create an atmosphere conducive to participation by the media in all phases of disaster management. The City will cooperate with local news media to disseminate emergency public information. An information center, which may be co-located with the Disaster Operating Center, will provide for gathering, production, and dissemination of information in forms suitable for print and broadcast media, including briefings, news releases, and interviews.

V. Fundamentals of Effective Public Information[2]

The public information system is based on the following concepts.

1. Communication

   Communication is a complex, multilateral, and reciprocal process of exchanging information among various persons, agencies, and sectors of the community. Its characteristics are:

   - It is a process that develops and continues over time and travels through formal and informal channels
   - It should be ongoing among various sectors of the community
   - Communication should flow in different directions
   - The process should lead to mutual trust and credibility among actors
   - It should contribute to the building of inter-agency and inter-sectoral relationships, common interests, and a common language

2. Participation and sustainability

   Participation is the process through which individuals become actually part of the disaster management process, thus leading toward a culture of prevention and preparedness. It is commonly accepted that community participation is a prerequisite for the long-term sustainability of disaster risk reduction strategies and programs.

3. Information and criteria

   Without quality information there can be no meaningful participation. Information should meet the following conditions.

   - Available in a timely manner
   - Accuracy of content
   - Appropriate as to level of detail
   - Clear and understandable to recipients
   - Culturally appropriate to the recipients, e.g. rural or urban, etc.
   - Easily accessible
   - Two-way dialogue and feedback
   - Authority and credibility of communicator

[2] Adapted from Wilches-Chaux, Sistema de Divulgación e Información Pública para la Gestión del Riesgo.

VI. Public Information Before and During Disasters[3]

There are two separate aspects of public information concerning disasters: that which is communicated before a disaster and that which is communicated during/following a disaster's impact.

1. Public Information for Prevention and Mitigation

There is need for a continuous campaign of public information dissemination through the various media including television, radio, and print media. This may include television and radio commercial spots and disaster-oriented dramas or games, pamphlets and brochures, newspaper inserts, etc.

2. Public Information for Response in case of Emergency

Emergency public information corresponds not to a continuous campaign but to procedures or protocols designed to evoke an appropriate public response in face of a disaster or the imminent threat of disaster. See the checklist of objectives that follows.

VII. Objectives of the Public Information System[4]

The public information system should strive to meet the following objectives:

1. To facilitate communication and coordination among public entities, the media, and the public

2. To provide appropriate channels and language to effectively convey alerts, warnings, and instructions

3. To disseminate accurate information, receive feedback, and control the spread of rumors

4. To persuade the public to take appropriate actions

5. To encourage ongoing involvement by the media in educating the public about reducing disaster risk.

[3] Adapted from Wilches-Chaux, op. cit.
[4] Adapted from Wilches-Chaux, op. cit.

VIII. Checklist for Dissemination of Information During an Emergency[5]

The Disaster Operations Center (DOC) should serve as the focal point for receipt, compilation, and dissemination through the Public Information Officer of information to the public, as outlined in the below checklist.

- Scientific or technical institutions, response agencies, or the community provide information regarding an actual or impending disaster.
- Responding agencies should deploy a trained staff member to the Disaster Operations Center (DOC).
- The DOC is the responsible entity for evaluation of information and the sole authorized channel for release of advisories, warnings, and official instructions through the Public Information Officer.
- The DOC will maintain a mechanism for coordinating the preparation and verification of public information with the involved institutions, assuring the most recent, accurate, and coherent information.
- The DOC will transmit official information to local authorities and to previously accredited members of the media.
- The DOC will function as the focal point for access to the latest information. The DOC will employ various means to divulge information, including briefings, news releases, press conferences, interviews, etc.
- The DOC will coordinate briefings and tours for VIPs and representatives of local, national, and international media.
- The DOC will be responsible for working with the media to control rumors and avoid the circulation of false information.
- The information released by the DOC will comply with the conditions of timeliness, accuracy, clarity, cultural acceptability and accessibility.
- All information to be released should be accompanied by instructions telling recipients what they should do in view of the information, even if that instruction is only to “stay tuned.” When the instructions imply the need for decisions and specific actions by the public (e.g. instructions to evacuate to an evacuation center), the instructions should be realistic and feasible.
- The DOC should guarantee the regular flow of official information to local authorities and, through the media, to the public.
- The Emergency Plan should establish alternate means of communication with the media and local authorities in case that normal means fail during a disaster.

[5] Adapted from Wilches-Chaux, op. cit.

- The DOC will receive and respond to requests received from the national and international media for information regarding the event and the response of involved agencies.

- The pre-disaster flow of public information should establish credibility among involved agencies and the public regarding the emergency information released by the DOC through the Public Information Officer.

- The DOC should facilitate the conditions conducive for public officials, the media, and the community to provide feedback and information to the DOC.

IX. Checklist for Mayor/Chief Executive[6]

- Designate a single Public Information Officer

  The PIO should be a senior official able to speak for the Mayor and all agencies involved in the disaster response. The person should be experienced in dealing with the media and familiar with the city's response plans and procedures. One or two back-ups should also have these skills in case the primary PIO is not available.

  While a single PIO can handle most emergency situations, in a large disaster there may also be need for:
  - An on-scene public information team, and/or
  - An emergency information and rumor control team at the DOC

- Monitor the media's capability to disseminate information during disaster

- Establish a media center where they will be regularly updated

- Ensure all public information releases are channeled through the Mayor and DOC

- Coordinate public information releases with other jurisdictions and levels of government

- Establish a policy and schedule for news media updates and access

[6] Adapted from Federal Emergency Management Agency, The CEO's Disaster Survival Kit.

X. Checklist of Duties for the Public Information Officer[7]

- Develop capability to rapidly release emergency instructions and information through all available means
- Maintain up-to-date listing of media resources and contact information
- Receive calls from the media and public and respond with official information
- Obtain reports or situation summaries from the DOC
- Prepare news releases
- Conduct situation briefings for media as appropriate
- Conduct tours of affected area, when and as appropriate
- Deploy on-scene public information team as appropriate
- Establish a field media center, if appropriate
- Provide two-way radios or other communications capability to PIOs working in the field so they may maintain contact with the DOC and lead PIO
- Coordinate with PIOs from other jurisdictions and levels of government
- Arrange interviews with key personnel (when requested by media and when it will not interfere with response operations

[7] Adapted from Federal Emergency Management Agency.

XI. Preparation and Issuance of Public Warnings[8]

A public warning is intended to bring about an appropriate response to avoid or minimize exposure to danger. Warning messages are one **part of the public information system**.

Public warnings should:

- Provide timely information about the hazard
- State what action should be taken to reduce loss of life, injury and property damage
- State the consequences of not heeding the warning
- Provide feedback to operational decision-makers on the extent of public compliance
- Cite a credible authority
- Be short, simple and precise
- Have a personal context
- Contain active verbs
- Repeat important information regularly

Methods for disseminating the warning may include:

- Messages released through the media (radio, television, print)
- Knocking on doors
- Community networks
- Loudspeakers, drums, gongs, or visual signals.

Special consideration should be given to warning special needs groups such as the elderly, infirm, and physically disabled.

[8] Adapted from National Disaster Organisation, Australian Emergency Manual: Community Emergency Planning Guide.

XII. Factors that Influence Societal Response to Warnings and Emergency Information[9]

A. Responding to Warnings and Emergency Information

People respond to alerts through a social-psychological process which is affected by various factors related to who transmits the alert, who receives it, the characteristics of the communication itself, and the circumstances surrounding it.

The process of alerting and responding to the alert begins when one hears the alert, although hearing the alert is not enough to cause people to take action. They must understand the message, and they must believe that the alert is real and accurate. They must personalize the message so that it is relevant to them personally. Finally, they must decide to take actions and overcome the obstacles that will impede them from taking the actions. These characteristics will vary widely among the members of society and according to different kinds of events and will also vary based on the past interaction between the people who issue the warning and those who receive it.

1. Hearing the warning or emergency information

The first phase in public response to a warning or instruction is hearing that an emergency exists. However, whatever means is employed to convey the information, it is likely that some people will not hear it, which naturally will delay their response.

2. Understanding

Once the information is heard, it needs to be understood, and not everyone will give it the same meaning or significance. For instance, a flood warning may be interpreted by some as reaching the roof, by others as reaching their ankles. Some people may regard a 50% probability of something occurring as being almost a certainty, while others will regard it as unlikely.

3. Believing

People must believe that the emergency is real and the information is accurate.

4. Internalizing

People will consider the information in relation to its implications for themselves and their families. If they think that the disaster impacts won't happen to them, they are likely to probably ignore it.

5. Responding

Once people have heard, understood, believed, and internalized the information, then those individual will act (or not act) based on their own personal perceptions and attitudes.

6. Confirming

[9] Adapted from Wilches-Chaux, op. cit.

People generally will not wait passively for the arrival of new information about the situation. Most people try to verify what they have heard, searching for more information or other sources of information to confirm the first information and to reduce uncertainty about how to react. As a result, telephone lines are usually overloaded after a warning or emergency, as people try to confirm what others know and what and how they are doing.

B. Factors Related to the Message which Influence Public Response

1. Credibility of the source or combination of sources of the information

2. Coherence of the message and consistency with other messages that people are receiving

3. The perceived correctness and truthfulness of the information

4. The clarity, simplicity, and understandability of the wording of the message

5. The degree of certainty conveyed regarding what is happening and what people should do

6. The message should provide enough information so that people do not feel they need to fill gaps with rumor or unverified information

7. An alert or warning message should provide specific guidance as to how to respond and how quickly they need to respond.

8. The warning message should be sent repeatedly to encourage people to believe it and respond.

9. The message should specify the area(s) affected by the warning.

10. Warnings should be transmitted through various channels or means—radio, television, sirens, etc.

C. Factors Related to Recipients which Influence Public Response

Public response to emergency information or warnings is also affected by factors related to the recipients of the information.

1. Recipients are more inclined to believe a warning if environmental or physical factors support it; for example, a flood warning is unlikely to be heeded on a sunny day.

2. Social factors provide the context for the message, e.g. if the family is together or not, what neighbors are doing, etc.

3. Socio-economic and psychological factors can affect response, and women more often heed warnings then men.

4. Personality and preconceptions can affect decision-making and behavior, and a fatalistic attitude can make one feel that their fate is not in their own hands.

XIII. Effective Public Education for Earthquake Hazards[10]

A. The Aim of Public Education

The goal of any public education effort is to change people's behavior. Public education about hazards such as earthquakes aims to increase actions by people and institutions to protect against the potential impacts of the hazard. A good public education project gives people something to think about and discuss with friends or family; the change in their behavior may come much later.

An effective public education program poses a problem and then tells how to solve it, over and over again.

As described in the previous section, there are personal and social characteristics of people that make them more or less likely to heed information about hazards and do something to increase their safety. Public education does not change these variables but takes advantage of them to deliver particular information to targeted groups.

Public educators have learned that people generally do not respond to "sermons" on why they should do something; they are more apt to take action if they work out a solution themselves, with helpful information from specialists. Most people are motivated to do something when they think it is their own idea.

B. Principles of Effective Public Education for Hazards

The following principles of public education for hazards are based on a major study in the U.S.:

1. Complicated phenomena (like earthquakes) must be explained in non-technical terms
2. Information must come from various credible sources
3. Consistent information should be repeated in various media
4. Messages on TV and radio are somewhat effective, but people like to have a written document they can refer to
5. Information should tell people what they can do before, during, and after the disaster; and
6. Discussion with peers helps people to believe the information and act on it.

Also, people prefer materials that are presented attractively and that are disseminated through credible professional or community networks.

Often, people are most inspired to take protective action against earthquakes immediately following an earthquake disaster which occurs either locally or remotely, especially if they know someone who is impacted by that disaster. Nevertheless, over the long run, the most important factors in effective public education are ensuring that materials are widely available, consistent, and presented by respected sources.

[10] Adapted from Sarah K. Nathe, "Public Education for Earthquake Hazards," Natural Hazards Review, 2000.

XIV. Media Resources in the Metro Manila Area

Organization	Category	Tel. Nos.	Remarks
The Association of Broadcasters in the Philippines (Kapisanan ng mga Brodkaster sa Pilipinas)	Radio/television	(632) 815 1990 Fax : 815 1989 815 1993 email: kbp@pacific.net.ph	Contact Person: Mr. Joselito Yabut Tel. No. 892-41-29 815-99-89
The Philippine Press Institute	Print Media	527-44-78 527-33-86	Contact Person: Mr. Ariel Severino

XV. Sources and References

The organizers of this Guide gratefully acknowledge the following sources and references which have been adapted herein for use by local governments and organizations in Metro Manila. Special thanks go to the insight and guidance of Gustavo Wilches-Chaux and Omar Darío Cardona. We take responsibility for any misinterpretation of intent or content.

City of Los Angeles, Emergency Operations Master Plan and Procedures, 1996.

Federal Emergency Management Agency, "Public Information Annex," The Federal Response Plan, 1992.

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5. Community Activity Guidebook

Community Activity Guidebook

Table of Contents

1. BACKGROUND OF THE STUDY

Metropolitan Manila, composed of 13 cities and 4 municipalities by the administrative boundaries, is the political, economic, and cultural center of the Philippines. The population of Metropolitan Manila is approximately 10 million at present, creating one of the most densely populated areas in Southeast Asia. Metropolitan Manila is located on Luzon Island, and numerous earthquake source faults are located in and around it. Among these, the Valley Fault System, which transects the study area, is considered to potentially cause the largest impact to the Metropolitan Manila area. Many research studies indicate that active phases of the Valley Faults are approaching, and the estimated magnitude will be around 7 or more. In order to manage the potential earthquake disaster in Manila, it is necessary to prepare an earthquake disaster mitigation plan and to start actions as soon as possible.

2. STUDY OUTLINE

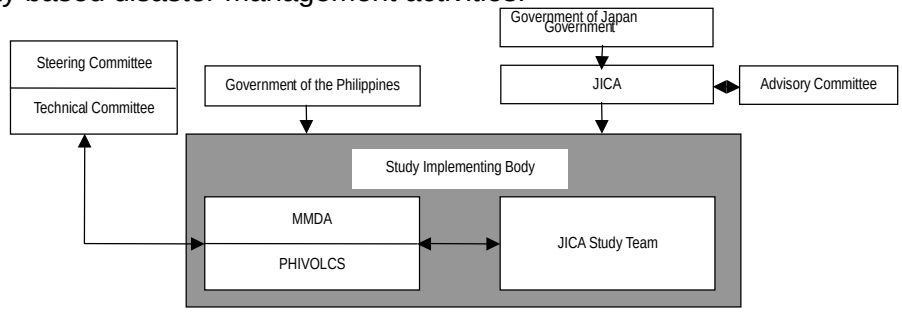
Study Title:	Study for Earthquake Impact Reduction for Metropolitan Manila in the Republic of the Philippines (MMEIRS)
Implementation Agency:	Japan International Cooperation Agency (JICA)
Counterpart Agency:	Metropolitan Manila Development Authority (MMDA), Philippine Institute of Volcanology and Seismology (PHIVOLCS)
Study Period:	From August 2002 to March 2004

Study objectives

1) To formulate a master plan for earthquake impact reduction for Metropolitan Manila in the Republic of the Philippines
2) To carry out technology transfer to Philippine counterpart personnel, of MMDA and PHIVOLCS, in the course of the Study.

Major contents

1) Existing data collection and evaluation
2) Geological survey
3) Social condition survey
4) Building and infrastructure survey
5) Important public facilities survey and hazardous material treatment facilities survey
6) GIS database development
7) Production of 1:5,000 scale digital topographic maps
8) Analysis of earthquake ground motion and hazards
9) Earthquake damage estimation
10) Preparation of disaster management plan for Metropolitan Manila
11) Community based disaster management activities.



Study Organization

3. COMMUNITY BASED DISASTER MANAGEMENT ACTIVITIES

Community based disaster management activities were conducted in the three selected pilot communities in barangay Ugong Pasig City, barangay 741 Manila City, and barangay Cupang in Muntinlupa city. The MMEIRS goal is to promote similar community based disaster management activities and make Metropolitan Manila safer by enhancing community resilience. For this reason, sharing experiences and learning lessons from the activities of three pilot communities provides the framework for disseminating similar activities. Two tools for dissemination are the Minutes of Agreements and the planning and activity guidebook for community based disaster management. MMDA and PHIVOLCS have signed the Minutes of Agreement that ensures further support of community based activities through the LGUs. MMDA will assist in formulating disaster preparedness planning activities and PHIVOLCS will contribute dissemination of technical knowledge about earthquake disasters. The procedures have been tested and reviewed in these activities and the effectiveness of the planning process has been proved. The MMEIRS Team is now approaching the Office of Civil Defense, MMDA, and PHIVOLCS for authorization of the guidebook to be utilized as an official guidebook for disseminating earthquake disaster preparedness programs at communities.

Community Based Disaster Management Activities

Activity		Agenda
Social Survey	Key informant survey Interview survey	◇ Vulnerability and capacity assessment
	Focus Group Discussion 1 and 2	◇ Sharing the Residential Survey results ◇ Receiving insights and discussion on key results
Community Activities	General Assembly	◇ Explaining damage estimation results ◇ Showing visual image of possible earthquake damages ◇ Sharing damage scenario and developing community response scenario
	Community Watching and Resource Mapping	◇ Identifying resources and risks in the community ◇ Mapping exercise ◇ Building regulations ◇ Introducing building damages and countermeasures ◇ Emergency community response
	Disaster Imagination Game (DIG) 1	◇ Mapping exercise of earthquake hazards ◇ Sharing vulnerabilities and capacities ◇ Earthquake emergency management planning ◇ Emergency Medical
	Disaster Imagination Game (DIG) 2	◇ Earthquake emergency management planning ◇ Presentation on specific topics
	Training	◇ Training community response in the actual Earthquake situation; testing evacuation routes, information management, learning first aid, fire extinguish, organizing community kitchen etc.
	Drill	◇ Testing the plan ◇ Training community response in the actual earthquake situation; testing evacuation routes, information management, learning first aid, fire extinguish, organizing community kitchen etc.
	Minutes of Agreement	◇ Identifying roles of PHIVOLCS, MMDA and LGU for the continuation of the activities ◇ Discussion and documentation

4. PLANNING GUIDE FOR COMMUNITY DISASTER PREPAREDNESS

1. INTRODUCTION

Metro Manila can be affected by earthquakes at any time
Recent study shows that earthquakes can happen at any time in Metro Manila. To protect life and properties of yourself and your family from disasters, enough preparations should be made beforehand, especially in case of earthquakes, which usually occur suddenly without any warning.

Public help may not be available in case of earthquake
In a devastating and catastrophic disaster like an earthquake, initial response work includes searching for and rescuing the victims trapped under collapsed structures, and simultaneous mass casualties may be occurring all around. In urban areas, lots of requests are expected to throng to the bureau of fire protection, but these requests may exceed far beyond their capacities, and response agencies may not be able to reach all needed areas in time.

Community saved lots of lives
In the Kobe Earthquake in 1995, about 85% of the trapped victims were rescued by the local community and only 5% were rescued by the bureau of fire. One community where no missing persons were reported rescued 300 people within ten hours, before public assistance arrived. Actually, 24 hours after the event, the possibility of people still being alive is very high. People's power in the community should be united, and neighbors need to help each other. The community is the primary response unit. Self help and mutual help saves many lives. Community solidarity is the basis for these activities to be nurtured.

Barangay disaster preparedness as a part of national security system
In the Philippines, P.D.1566 establishes the national program for community disaster preparedness. The Calamity and Disaster Preparedness Plan presents the responsibilities for disaster management from the National down to Regional, Provincial City/Municipality, and Barangay levels. The roles of the Barangay and Barangay Captain are defined in the Barangay Disaster Manual issued by Office of Civil Defense.

Barangay's mandate for disaster preparedness
The Barangay has the inherent responsibility of protecting its members from the effect of disasters. The Barangay Captain must take necessary precautions to make certain that the community knows how to react in an emergency and normal functions of the community can be continued after a disaster interrupts them. The development of the Barangay Disaster Preparedness Plan is the Barangay Captain's responsibility. A disaster preparedness plan should be put in writing. The aim of the plan is to protect life and minimize damage to property in case of emergencies of all causes.

Barangay is nucleus of community governance
The Philippines has a unique local governance system of Barangays. The Barangay has a function of primary planning and implementing of government policies, plans, programs, projects, and activities in the community and serves as a forum wherein the collective views of the people may be expressed and crystallized. In the barangay, general assemblies are held and people's views are directly expressed. The Barangay is the nucleus of community governance. Under good community governance, each individual acts autonomously, participating in various initiatives, thus establishing a new form of public system. This is the bottom up approach of new governance, where grass–root level needs and demands will be crystallized.

Disaster management is enhancing social capital
Community Based Disaster Management activity is not only preparing for disaster but enhancing social capital. Through the process, the community will be enhanced in many different aspects; mutual trust will be built, livelihoods will be upgraded, children will be educated, and a quality living environment will be realized.

Disaster management is upgrading living standard
For an earthquake safer community, long term perspectives are needed. These include earthquake resistant building structures, land use plans, and an urban plan of road networks, open space and community facilities. These issues are equal to upgrading the living environment. The process of disaster management is the process of upgrading the living environment.

Filling a gap between form and actual practice
The Local Government Code of 1991 has given Barangays additional power for planning and implementation and a new source of revenue. This is the existing official mechanism defined in the legal framework that policies and plans can be made at the grass-roots level. This needs to be implemented into actual practice.

Why a planning guide?
At present, although it is a mandate of the barangays, most barangays have not prepared written barangay disaster preparedness plans. This guidebook aims to aid barangays to prepare the plan by showing a concrete planning step, focused on how to do it.

Who are the users?
The target users of this guidebook are barangay captains, officials, community leaders and all stakeholders of the target community, since the planning process should be shared among them.

Why should the community get involved?
Local people are the best source of knowledge about their community so that solutions can address what is really needed and wanted. This is why community people should get involved and the participatory planning process is effective.

Participation is a learning process for everyone
In participatory workshops, different parties representing various sectors and disciplines are involved. Mutual trust is a prerequisite, and each individual contributes knowledge, learns from each other, and thinks together. The participatory planning process is a learning process for everyone, and it is the process of establishing partnerships and interrelationships. Each sector cooperates with each other, respecting differences and working toward common goals.

Participation strengthens community ties
Social cohesion can be strengthened by understanding each other. Sharing experiences and activities among the community is the best way to develop understanding of each individual's capacity. Participatory activities are an effective way of strengthening community ties.

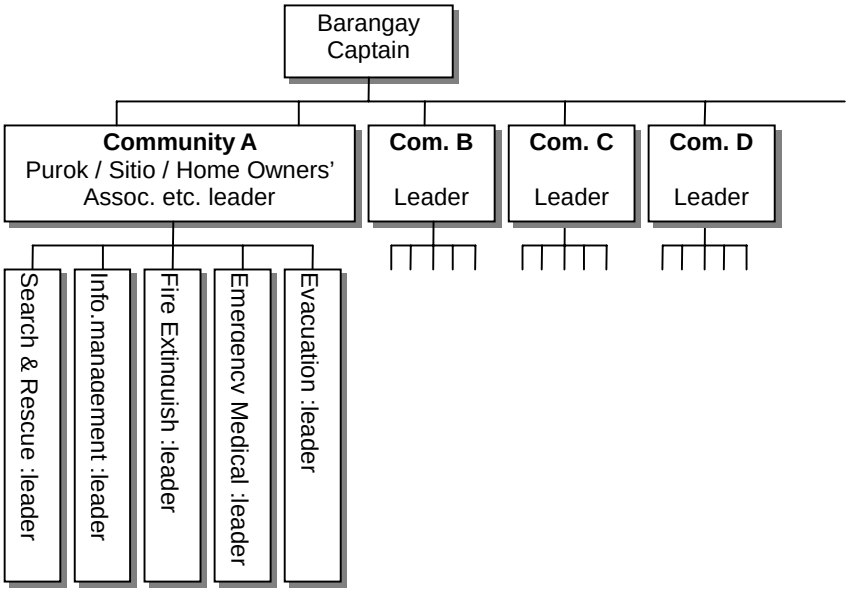
Community building
An intervention from the outside experts may seem to shorten the way, but in the long run it will not be the short cut. Outsiders are the catalysts who encourage the community to realize what they should do. To make the planning activities a success, the commitment of the local participants is essential. Involvement of stakeholders from the initial planning stage, sharing all the steps of trials and errors, and eventually making decisions are the essential process. In this process, confidence, ability to cooperate, and sense of ownership of each participant will be built, and the capability to implement counter-measures to the problems will be enhanced individually and collectively.

Earthquake scenario will visualize the real situation
Risk management is not only theory but practice. Disaster Management Planning comprises process oriented activities. A catastrophic disaster is beyond imagination for most people. Information and description about disasters are useful for participants to understand the real situation. MMEIRS's Earthquake Damage Estimation is a possible scenario that visualizes the earthquake disaster situation.

A product of JICA funded Earthquake Impact Reduction Study for Metropolitan Manila
This guidebook is a product of the community based disaster management activities conducted under the JICA funded study, "Earthquake Impact Reduction Study for Metro Manila". In this study, three communities in Metro Manila were selected to conduct community based earthquake disaster management activities and develop disaster management capabilities and plans. The book is written based on the field experiences and lessons and is focused on developing an earthquake disaster management plan. More experiences and feedback from barangays and communities are expected to be incorporated in the revised edition.

2. PLANNING GUIDE

Identify appropriate size of community unit
The size of the barangays differs from each other; some barangays have more than fifty thousand population, whereas smaller barangays such as in Manila City and Pasay City have a few thousands. The manageable size, in case of emergency situation, of one unit is said to be about a population of 500. In bigger barangays, sitios, puroks, compounds, and homeowners' associations can be identified as the smaller unit below the barangay. It is recommended to make a plan in this unit and sub-divisions into further smaller units such as street level can be identified under this. For more effective management, further smaller units at street level called looban are ideal to be identified. The vertical chain of command system under the barangay needs to be established and roles of each level should be identified. The identification of the manageable community unit is the starting point, and in this unit, an autonomous disaster risk management group can be established and roles and responsibilities can be defined.



Autonomous disaster risk management group

Planning Process

The planning steps are listed in the following table. It starts with identifying participants and establishing the planning committee. A needs analysis is useful to establish the context of the plan. After that, risk will be identified and shared with the community. The earthquake damage scenario will help people to understand the possible hazards and damages. Metaphorically speaking, earthquake disaster is your enemy and knowing the enemy is the first things to do. Furthermore, you need to know your own capacities and weaknesses. "Community Watching" and "Risk and Resource Mapping"[1] are the useful tools to understand this. The third stage is to treat risk; planning objectives will be set, management structures will be formulated, and responsibilities will be allocated. Disaster Imagination Game is a tool for this exercise. It is not easy to imagine the earthquake disaster situation, thus Disaster Imagination Game is helpful. The fourth stage is checking and monitoring. The output of the plan should be tested and exercised through a drill. The plan should also be regularly reviewed and updated. Planning is a continuous process and the planned documents should remain a living thing by constant testing and revision.

Planning and activity process

Stage	Steps	Tool
Establish Context	Identifying participants Establishing planning committee Mapping out stakeholders' commitment Needs Analysis	Stakeholder Analysis Key Informant Survey Log flame, SWOT[2] analysis
Identify Analyze Evaluate Risk	Disseminating damage scenario Identifying vulnerability and capacity in the community Locating the vulnerabilities and capacities	**Vulnerability and Capacity Assessment** **Community Watching** **Risk and Resource Mapping**
Treat Risk	Setting planning objectives Allocation of responsibilities Documenting the plan	**Disaster Imagination Game**
Monitor & Review Communicate & Consult	Testing the plan Reviewing the plan	**Drill** Training Program Scenario-based training program

Self-help and mutual help attitude in planning

To protect oneself from disasters, an attitude of self-help and mutual-help is essential. Community leaders and residents have to have a common understanding regarding how to respond to disasters. And residents have to have the sense of follower-ship. If people are out of control, the disaster creates more disaster. The important thing is that: We will think about what people do not want to think about. It is too late to think about it after people are dead. The dead have no voice. To protect one's own life, one has to prepare by oneself. This is the basic principle. Each individual has to bear in mind that "I myself will save my life" and "We ourselves will protect our community." Everyone must acquire practical training and knowledge and this will result in a risk management culture.

Risk management is not only emergency response

However, risk management is not only emergency management. Earthquakes do not kill people, but buildings kill people. To secure one's life, buildings should be strengthened, and a safer urban structure should be established.

Earthquake risk management as a total, not only disaster responders such as police, fire, and medical practitioners, but also structural engineers, civil engineers, and city planners play important roles, too. These issues require a long term perspective; this is why strong political will and

[1] The word "risk" in "Risk and Resource Mapping" is intrinsically "vulnerability". However, for easier understanding among community people "Risk and Resource Mapping" was adopted in the MMEIRS activities.

[2] SWOT stands for strengths, weaknesses, opportunities, and threats. SWOT analysis is a tool for analyzing an organization and its environment at the first stage of planning. During the SWOT exercise, list factors in the relevant boxes.

understanding by policy makers and politicians are essential. By the time safer houses and safer urban structures are established, the response work of police, fire, medical respondents and barangay officials will be drastically reduced, and emergency activities will be effectively conducted.

Emergency management capacities can be enhanced through planning and drills
The process of thinking how to react to emergency situations is a good exercise. Drills are a good chance to test plans. It is easy to do familiar things if one has experience, but to do something for the first time, one cannot react well. This is why preparation is needed. Emergency planning will help participants learn how to effectively react to the actual situation. This planning guide focuses on emergency management. For smaller units like a community, emergency management is a good start to revitalize and activate community organizations, since organizing a community is a primary step to take.

3. ACTIVITY GUIDE

Step 1 Identifying Participants
Identifying appropriate participants is vital for understanding the social and institutional context of the program. From the beginning, it is important to consider who will be affected, who can influence others, which individuals, groups, and organizations need to be involved, how and whose capacities should be enhanced. At the first meeting, clarifying whose plan it will be and setting the planning aim can be discussed. Stakeholders of the planning exercise include barangay captain, kagawad, tanod, police, bureau of fire, barngay bureau, city rescue (if any), health and medical post, social workers, health workers, school, church, community based organizations, local private enterprises, officials from city and municipality such as disaster action officer, social welfare officer, health officer, public information officer, building officer, planning officer, public information officer, etc., utility company representatives from MWSS, Meralco, etc. The following questions are useful to draw a preliminary road map for guidance.

- Who can contribute financial and technical resources?
- Whose behavior will be influential for the effort to succeed?
- Who is responsible for overall direction and intent?
- Who can mobilize support or opposition for/against what is intended?
- Who are the voiceless?

Step 2 Establishing Planning Committee
To begin formulating community plans, a planning committee consisting of core members is a practical way. This committee will act as secretariat of planning activities and its roles will be identified. Be sure that representatives from the barangay and key persons from local organizations are involved.

Step 3 Mapping Out Stakeholders' Commitment
Once participants are identified, it is useful to categorize the degree of participation and roles and responsibilities for the entire planning effort. The following chart is the sample for this exercise. Representatives from each institution need to be committed to the planning process and if they cannot attend a meeting or workshop, alternative persons should be identified and the process needs to be handed over.

Mapping out of participation

Degree of participation	Description	Initiation stage	Planning stage	Implementing Stage	Maintenance Stage
Citizen Control	Community has initiative to do	*Barangay* *X Purok*	*X Purok* *Disaster Planning Committee*		
Partnership	Work will be shared and decision will be made	*Disaster Action Officer（City）* *MMDA* *PHIVOLCS*	*Barangay* *Social worker* *Health worker* *School* *Church* *Clinic*		
Consultation	Community will ask for professional advice and opinion	*City officials* *Administrator* *Community affairs*	*Meralco*		
Informing	Information will be shared	*Surrounding puroks, barangays*	*Surrounding puroks, barangays*		

Step 4 Needs Analysis

To know the local stakeholders' needs is the essential factor. To prepare for disasters is not only disaster risk management but attaining overall development. For sustainable development, local needs and priorities should be researched and analyzed. Development needs, problem identification, constraints and driving forces for each problem need to be identified.

Step 5 Disseminating Damage Scenarios

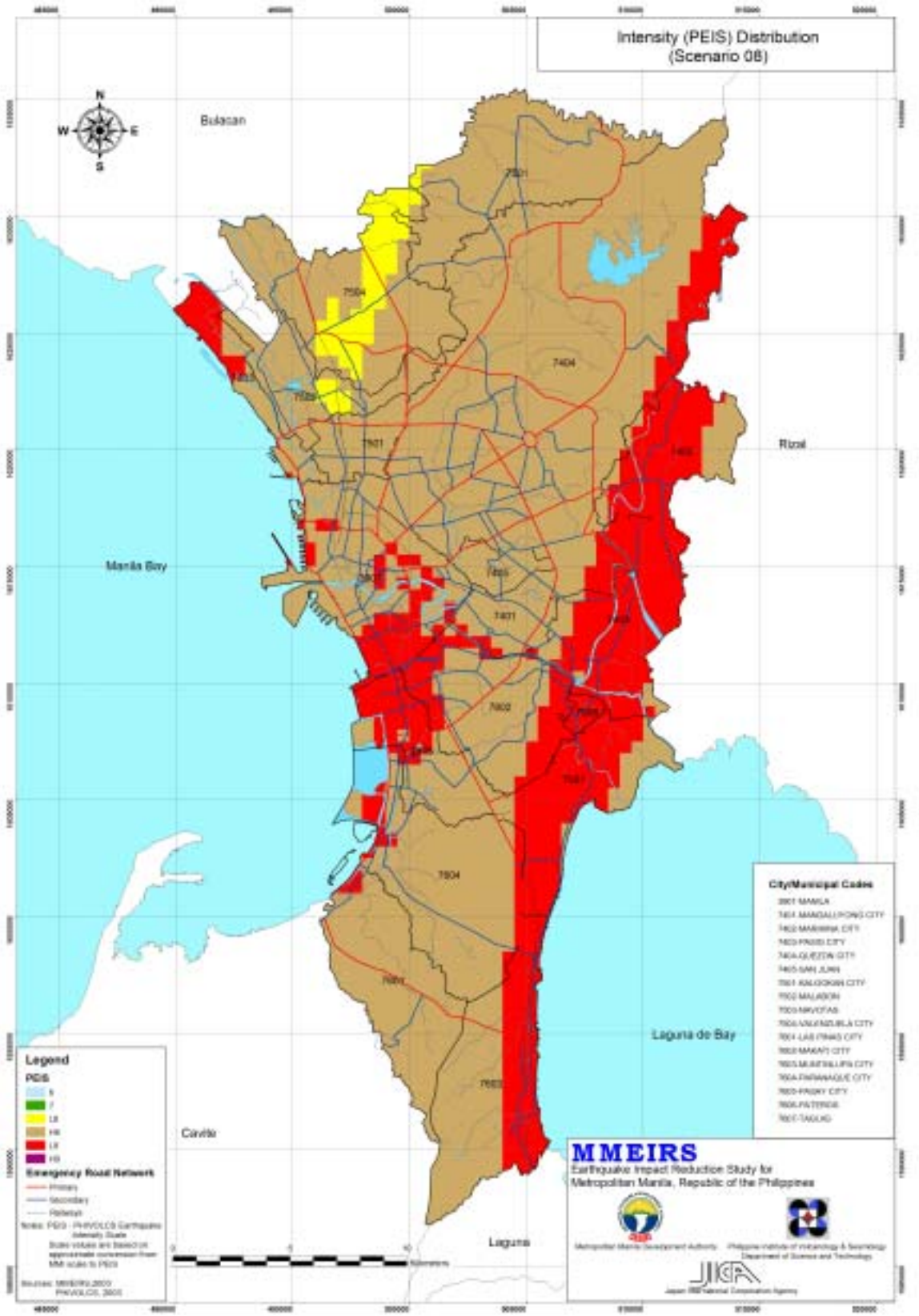
Identification of the possible local hazards and effects of them on each and every community is essential. This process provides the basis for risk management planning. This enables local people to set planning objectives and identify problems in planning. Following is the estimated earthquake hazard in Metro Manila. The story-type damage scenario will facilitate imagining the real earthquake situation. In this step, this information is disseminated at a meeting or workshop with the participation and explanation from an expert from PHIVOLCS or other person familiar with the scenarios.

Estimated earthquake hazard

Analyzing past historically recorded earthquakes and instrumentally recorded earthquakes, a total of 18 earthquakes are selected as scenario earthquakes which have potential damage effects to Metropolitan Manila, and earthquake ground motion, liquefaction potential, slope stability and tsunami height are estimated. Three models, model 08 (West Valley Faults), Model 13 (Manila Trench), and Model 18 (1863 Manila Bay), are selected for detailed damage analysis because these scenario earthquakes show typical and severe damages to Metropolitan Manila.

Scenario Earthquakes and Those Hazards

Model and Magnitude	Model 08 (M=7.2)	Model 13 (M=7.9)	Model 18 (M=6.5)
Seismic Intensity (PEIS)	Almost VIII, IX alongside of Marikina River and Manila Bay,	VIII at West of Metropolitan Mania, VII at other area	Almost VIII, VII at Quezon City
Liquefaction	High possibility at mouth of Pasig River, Taguig, Relatively high possibility at alongside of Manila Bay	Relatively high possibility at Taguig, alongside of Manila Bay	High possibility at mouth of Pasig River, Relatively high possibility at alongside of Manila Bay
Tsunami	Not occur	Maximum 4m, Average 2m alongside of Manila Bay	Small effect



Seismic Intensity Map Model 08

PHIVOLCS Earthquake Intensity Scale (PEIS) (Extract)

Intensity	Description
VI	Very Strong - Many people are frightened; many run outdoors. Some people lose their balance. motorists feel like driving in flat tires. Heavy objects or furniture move or may be shifted. Small church bells may ring. Wall plaster may crack. Very old or poorly built houses and man-made structures are slightly damaged though well-built structures are not affected. Limited rock falls and rolling boulders occur in hilly to mountainous areas and escarpments. Trees are noticeably shaken.
VII	Destructive - Most people are frightened and run outdoors. People find it difficult to stand in upper floors. Heavy objects and furniture overturn or topple. Big church bells may ring. Old or poorly built structures suffer considerably damage. Some well-built structures are slightly damaged. Some cracks may appear on dikes, fishponds, road surface, or concrete hollow block walls. Limited liquefaction, lateral spreading and landslides are observed. Trees are shaken strongly. (Liquefaction is a process by which loose saturated sand lose strength during an earthquake and behave like liquid).
VIII	Very Destructive - People panicky. People find it difficult to stand even outdoors. Many well-built buildings are considerably damaged. Concrete dikes and foundation of bridges are destroyed by ground settling or toppling. Railway tracks are bent or broken. Tombstones may be displaced, twisted or overturned. Utility posts, towers and monuments mat tilt or topple. Water and sewer pipes may be bent, twisted or broken. Liquefaction and lateral spreading cause man- made structure to sink, tilt or topple. Numerous landslides and rock falls occur in mountainous and hilly areas. Boulders are thrown out from their positions particularly near the epicenter. Fissures and faults rapture may be observed. Trees are violently shaken. Water splash or stop over dikes or banks of rivers.
IX	Devastating - People are forcibly thrown to ground. Many cry and shake with fear. Most buildings are totally damaged. Bridges and elevated concrete structures are toppled or destroyed. Numerous utility posts, towers and monument are tilted, toppled or broken. Water sewer pipes are bent, twisted or broken. Landslides and liquefaction with lateral spreading and sand boils are widespread. The ground is distorted into undulations. Trees are shaken very violently with some toppled or broken. Boulders are commonly thrown out. River water splashes violently on slops over dikes and banks.
X	Completely Devastating - Practically all man-made structures are destroyed. Massive landslides and liquefaction, large-scale subsidence and uplifting of land forms and many ground fissures are observed. Changes in river courses and destructive seiches in large lakes occur. Many trees are toppled, broken and uprooted.

Estimated earthquake damage

A summary of the estimated earthquake damage for the worst case Model 08 is as follows:

Summary of Earthquake Damage

Scenario Earthquake	Model		Model 08 West Valley Fault
	Magnitude		7.2
	Fault Mechanism		Inland Fault
Residential Building 1,325,896	Damage	Heavily	168,300 (12.7%)
		Partly	339,800 (25.6%)
Population 9,932,560	Casualty	Dead	33,500 (0.3%)
		Injured	113,600 (1.1%)
Fire	Outbreak		500
	Burnt area and buildings	Wind Speed 3m/s	798 ha 42,100 buildings
		Wind Speed 8m/s	1,710 ha 97,800 buildings
	Casualty	Wind Speed 3m/s	7,900 (0.1%)
		Wind Speed 8m/s	18,300 (0.2%)
Bridge 213 (with detail inventory and stability analysis 189) Flyover 80 (with detail inventory and stability analysis 38)	Large possibility of falling-off	Bridge	7
		Flyover	0
	Moderate possibility of falling-off	Bridge	2
		Flyover	0
Water Supply Distribution Pipes Total 4,615km		Break of pipes or joints	4000 points
Electric Power Transmission and Distribution Line, Total 4,862km		Cut of cables	30 km
PLDT Telephone Aerial Cable 9,445 km, Underground Cable 3,906 km		Cut of cables	95 km
Public Purpose Buildings (Hospital 177, School 1412, Fire Fighting 124, Police 43, MMDCC Organizations and 17 LGU City and Municipal Halls 53)		Heavily Damaged	8 - 10 %
		Partly Damaged	20 – 25 %
Mid-rise and High-rise Buildings	10-30 stories 981 buildings	Heavily Damaged	11 %
		Partly Damaged	27 %
	30-60 stories 119 buildings	Heavily Damaged	2 %
		Partly Damaged	12 %

Earthquake Damage Scenario During the First Week after Occurrence of the Earthquake

Basic Condition Scenario earthquake: Model 08 (West Valley Fault, Magnitude 7.2) Occurrence of earthquake: 7PM, wind speed 8m/sec.

The estimated damages have been translated into a script for better understanding. Lynn Paladio-Melosantos of PHIVOLCS developed the script, the contents of which contents were discussed with the Study Team before being finalized.

Day 1

Evening. February 5, 2004 is a typical Tuesday, the traffic, the crowd, the sunset at 6:14 as announced by PAGASA. Except that today you are not coming home from work, but from the WORKSHOP at Manila Pavilion Hotel. You are almost home; looking forward to a simple tinolang manok that you know is stewing in your kitchen.

You get off from the bus and navigate your village road. As you are walking the last few meters to your gate, you feel a sudden jolt. It sort of pushes you forward. At first you don't know what it is. But the ground continues shaking, up and down, sideways, getting stronger every second. You fall to the ground, unable to keep standing. You hear a booming sound. You hear screams from people inside their homes. You hear breaking glasses. Telephone and power poles sway violently. Then the power goes off. In front of you, the village road is heaving, as if you are riding waves. The strong ground shaking goes on for 50 seconds. It is the longest 50 seconds of your life.

The ground shaking has stopped but you remain on the ground, still feeling dizzy. You try to get up, your knees shake under you. People start pouring out of their homes. Panic and confusion are everywhere. Occasional cries and wails add to the confusion. Around you are toppled poles and fences, collapsed houses, cracked roads, broken water pipes.

You got home as quickly as you can. You recognize your family amongst the crowd on the village street. They are all home, shaken but unhurt. You let out a sigh of relief and say a prayer of thanks. But your family refuses to enter your home. A barangay leader gives instructions to you and your neighbors to move to the basketball court to keep away from objects that may fall or topple.

You move your family as instructed. You try to make a call to other relatives but your mobile phone has no signal. Still you dialed a number. It didn't work. You finally walked back to check your home. But home is something you barely recognize. Everything seems to be piled up on the floor – appliances, shelves, books, lighting fixtures, family portraits, clothes, your prized Jollibee collectibles, even the tinola dinner.

Among the pile of mess on the floor, you pick up the old battery-operated transistor radio that your mother-in-law refuses to part with. You turn it on. At first you only get static. You play with the dials and catch this piece of news: PHIVOLCS issued a bulletin that says a devastating earthquake, with magnitude 7.2 generated by the nearby West Valley Fault, hit Metropolitan Manila. The ground shaking was felt at PEIS VIII in Metropolitan Manila. Weak to strong aftershocks are expected.

You rummage for blankets and go back to the basketball court. You try to think happy thoughts knowing this would be a very long night. You stay tuned in to the radio. News trickles in.

- There is a major power outage in Metropolitan Manila as well as in the neighboring provinces in Luzon.
- Telephone lines, including cellular networks, are down.
- Many residential houses are heavily damaged and collapsed
- Some school buildings collapsed.
- A few hospitals are heavily damaged, ICU patients need to be transferred, and other patients need to be evacuated.
- Fires broke out in several residential clusters, chemical plants, and few other factories and hospitals.
- Hundreds, if not thousands, are estimated trapped dead or injured from collapsed or burning houses, buildings and factories.
- Abandoned cars, some damaged by falling objects, littered the streets of Metropolitan Manila.

Within the next few hours after the earthquake, the National Disaster Coordinating Council convened. Not all the member agencies have representatives immediately available.

Day 2-3

You are one of the more fortunate. No one is injured in your household. But your house is damaged and you are not sure if it will survive the next strong aftershock. Also, food and drinking water are becoming scarce.

The barangay leaders and community members work together to provide for everyone.
Overnight you felt several moderate to weak after shocks. There is still no electricity, telephone communication, and water. Haze from burning buildings darkens the horizon. Fires still spread unabated.
News reports give more dismal picture of the extent of damage brought by the earthquake:

- The President declares a state of calamity. She mobilizes the Armed Forces of the Philippines for rescue, clearing of debris, and construction of temporary shelters. She suspends schools and offices.
- Philippine flags fly at half-mast.
- PHIVOLCS confirms movement of the West Valley Fault after it conducted an aerial survey over Metropolitan Manila.
- Volunteer rescue groups from Olongapo and Baguio City coordinate with the NDCC.
- Back-up power generators are available only in critical public and private offices.
- There are more reports of collapsed houses, now numbering in the thousands, mid- to high-rise buildings, and major bridges
- Many roads are impassable.
- The LRT and MRT railways remain standing but not operational.
- Reports of casualties continue to rise to several thousands.
- Several thousand families have lost their homes and begin to occupy open spaces.
- People rescued from collapsed buildings show crush syndromes and given medical attention on site in temporary medical shelters. They cannot be transferred immediately to hospitals because ambulances cannot get through the roads littered with debris and cars.
- The police contain random acts of looting.

Day 4-7

You continue to occupy the basketball court. There is still no power, communication and water supply.
In the tent clusters that sprouted in parks and other open spaces, the lack of clean water supply makes the outbreak of infectious diseases a threat.
In hospitals, injured patients are lined up even along corridors. Again, the lack of clean water is a major problem.
Many people, especially children, suffer from shock, traumatized by the strong ground shaking, the sight of destruction, or being temporarily trapped.
Bodies exhumed from rubbles are lined up along the streets. The air has the distinct smell of decay.
International volunteer rescue teams coordinate with the NDCC. Rescue will continue in the next few days.
Clearing of debris will continue for several weeks to months. Bodies will continue to be recovered among building debris.
Relief goods are distributed in evacuation centers. Some evacuation centers receive more relief goods than others.
Neighboring Asian countries pledge and extend technical, medical and other forms of support.
The Government appeals to those with capabilities to join forces in responding to the disaster. Recovery and rehabilitation will take years and years.

Step 6 Identifying vulnerability and capacity in the community

Vulnerability and Capacity Assessment (VCA) is the starting point of disaster risk management. You need to know your own weaknesses and strengths to overcome disasters. VCA aims to identify, analyze and evaluate disaster response capacities, not only physical resources but also social, attitudinal, and organizational aspects. It involves the community's participation to analyze their own capacities, which will encourage the community to build sense of ownership.
In the participatory risk assessment, various survey methods such as semi-structured interviews, focus group discussions, and tools of Participatory Rural Appraisal[3] and/or Participatory Learning and Action[4], such as utilizing maps, seasonal calendars, historical profiles, institutional and social network analysis, and problem trees can be employed.

Participatory survey will develop local skills and capacities

3 The Participatory Rural Appraisal（PRA）is one of the techniques used for gathering information on community resources and needs for use in literacy and community development programs. The techniques include the use of transect walks, maps, calendars, matrices, and diagrams using locally available materials.
4 Participatory learning and action (PLA) is a research technique that enables people to communicate their experience in a way they feel comfortable with. The theme is the full participation of people in the processes of learning about their needs and opportunities, and in the action required to address them (Source: PLA Notes)

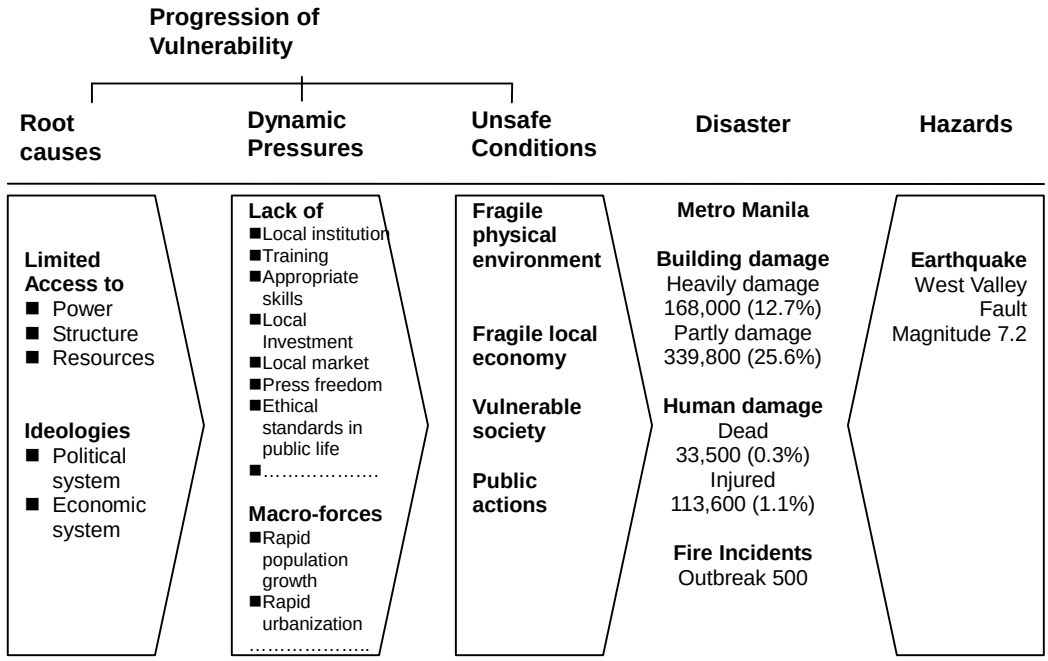
Vulnerability and capacity assessment is a good opportunity to develop local skills and capacity. Involve community people in this survey to understand their own situation, and get community participants involved in assessing the results. It is important for them to realize their own capacities and vulnerabilities. This self evaluation process is essential to create motivation to reduce local vulnerability.
The indexes of VCA are categorized in the following table.

Index of Vulnerability and Capacity Assessment

Category	Index
Resource Structure	■ High population density ■ Dependence on lifelines ■ Gap of day time population. night time population ■ People coming from outside ■ Scarce resources (individuals, local organizations, CBOs, Barangay, LGU) ■ Lack of disaster countermeasures (individuals, local organizations, CBOs, Barangay, city gov. local enterprise) ■ Lack of disaster management plan ■ Lack of disaster management facilities ■ Distance to evacuation site, fire hydrant, water supply, access to shops, public facilities, welfare facilities ■ Distance to workplace ■ Economic capacity ■ Employment status (unemployment, part-timer) ■ Family composition ■ Household members, kinship ■ Ratio of elderly, disabled persons ■ Influx of outsiders, boarders ■ Weak neighborhood relationships ■ Weak family relationships ■ Activities based in the community (year of living, commitment) ■ Low skills for living ■ Access to medical services ■ Geological conditions (lowland, swampy land, slope land) ■ Land ownership ■ Building ownership
Execution structure	■ Uncertain responsibilities of the disaster management organizations ■ Skills of disaster respondents ■ Exclusiveness of organizations ■ Coordination between organizations ■ Decline tendency of local organizations ■ Organizing abilities（member、fund raising capacities） ■ Distribution of political power ■ Sense of Volunteerism
Decision making structure	■ Leadership ■ Decision making mechanism (each DM organization, community, Bgy, LGU) ■ Plural will ■ Organizational background of leaders, politicians ■ Tendency of resolving disputes, local problems ■ (Bgy, LGUs churches, politicians, citizens) ■ Community movement, citizens' movement, CBOs ■ Information resources, amount of information, dissemination route
Value and normative structure	■ Resignation to disaster ■ Disaster culture ■ Cultural stability ■ Social psychological stability ■ Standard of social security system ■ Regulations, normative guidelines for behavior ■ Level of Disaster knowledge, local countermeasures, theoretical knowledge ■ Lack of disaster consciousness, awareness ■ Lack of disaster knowledge

The following model shows the image that disaster is the intersection of two opposing forces: those pressures generating vulnerability on the one hand and physical exposure to a hazard on the other.

The left hand side illustrates progression of vulnerability. A series of levels of social factors generates vulnerabilities. The root causes of the disaster sometimes lie in the distance, like the economic and political sphere. These are normally a function of the economic structure, political system, legal definitions of rights, gender relations, etc. The check list of the above is listed in parallel, but thinking about the progression level of vulnerability will help us think about how to approach reducing vulnerability.



Source: "At Risk" Piers Blaikie et al.

Progression of vulnerability

Step 7 Locating the vulnerabilities and capacities

After identifying the vulnerabilities and capacities, locating them on a map will help participants to visualize local situations more clearly. The location of the vulnerability and capacity will make it easier to discuss how to manage the emergency situation and make a plan for it. To accomplish this, "Community Watching" and "Risk and Resource Mapping" are two useful tools.

Community Watching

Community watching is the walking tour of your own locality. Even though VCA results reveal that participants have a low risk perception or fatalism in the beginning, community watching and the risk and resource mapping exercise will raise the level of risk perception and change peoples' behavior towards hazards and risk. Community watching is a revisiting of your own locality and making people realize their own vulnerabilities and resources clearly and concretely with spatial identification. The following describes how to conduct Community Watching.

1) Route Setting for community watching (30mins – 1hr)

Routes for the community watching will be set by the core members or planning committee members on a separate day in advance of the community watching. In the preparatory session, the following activities will be done by using maps. The things to prepare are listed below.

Things to do:
1) Write landmarks on the base map
2) Decide important places to be intensively covered
3) Identify check points
4) Set routes
5) Mark the routes in A3 size Map

Things to Prepare:

Maps (A0 size: 1/500, 1/5,000, on table, A3 size: 1/2,500 to carry)

Colored pens, 5 color each, 5 sets
Camera
Scotch Tape
Benzene (as an Eraser)
Colored Stickers
Tooth Picks
Transparent Sheets
Post Its (Different Colors)
Pencils
Tissue paper
Memo Pad
Clay

2) Community watching session

a) Grouping (30mins)

Participants are divided into groups of 7-10 persons and are allocated tasks. The roles and their tasks are described in the following table.

Allocation of tasks

Roles	#	Task	Name
Photographer	1	To take photos of members and Risk & Resources	
Risk and Resource Inspector	2	To identify risk and resources on the street.	
Navigator	2	Navigation of team Identifying location of Risks and Resources on the map	
Sticker Manager	2	To place stickers on a map based on the legend	
Time Keeper / Security Manager	1	Considering time Watch every member's security	
Reporter	1	To present the findings	
Map Producer	1	To direct risk and resource maps	

b) Identifying risk and resources (40mins)

Before starting the walking tour, participants share the idea of their own risk and resources and make a list of them as shown in the table. In the community watching tour, ownership and specific features will be researched and the table completed. Add additional risks and resources in the column.

Risk

Legend	Risk	#	Owner	Specific Features
Physical Risk				
	Unstable High Wall			
	Unstable Structures			
	Electric Post			
	Electric Transformer			
	Narrow street			
	Flammable / Hazardous Materials (Kerosene, gas cylinder, chemicals, gasoline station, etc)			
	Congested Wooden houses			
	……..			
Human Risk				
	Aged People			
	Handicapped People			
	Infirm People			
	……..			

Resources

Legend	Resources	#	Owner	Specific Features
Physical Resources				
	Ambulance	1		
	Open Space (Park, Plaza etc)			
	Shelter, Church, School, Community building, Bgy building, Covered court			
	Fire Hydrant			
	Water Tank			
	Heavy Equipment (Forklift, Trucks, generator, etc)			
	Shop and Store			
	……..			
Human Resources				
	Carpenters/Masons			
	Structural Engineers			
	Med. Doctors / Nurses			
	Health Workers / Social Workers			
	Amateur Radio Communicator			
	……..			

c) Map Reading (30mins)

Before starting, participants indicate the major roads in the neighborhoods, landmarks and each participant's house on the map that will be utilized in the community watching.

d) Watching tour (60mins)

Participants will find unsafe, hazardous materials, safe places, useful materials and human resources at the time of disaster. Check them with the location and document them on the map and by taking photos. Local residents will surely encounter a new discovery. The duration of time for community watching depends on the size of the area to be covered. According to the number of participants, the target area can be divided by the groups.

Risk and Resource Mapping

Participants will compile all data in one map. Colored pens and Post-its can be utilized. Photos will be attached to the map, too. Transparent sheets are useful since colored ink can be erased by benzene. Each group will present their maps and share their findings and opinions.

Step 8 Setting planning objectives

After getting all the necessary information about hazards, vulnerabilities, and capacities, the areas for special attention and support will become clear. Setting planning objectives is recommended in the earlier stage of the planning session. If it is difficult to agree on certain objectives, a practical approach is setting provisional objectives and in the course of the planning process they can be revised and finalized upon the consensus of each stakeholder.

Step 9 Allocation of responsibilities

Responsibilities for each task will be decided. Functions of control, command and coordination will be cross checked to avoid overlap between task forces and actors.

Step 10 Documenting the plan

After the plan has been developed, putting it in the document is the important process. A common format can be developed within the same barangay / city. The statement should be simple and clear. Organizational charts, lists of equipments, risk and resource maps can be attached in the appendix. Even though the initial plan is primitive, it can be developed through the regular drills. Steps 8-10 can be done by utilizing a tool of Disaster Imagination Game.

Disaster Imagination Game

The Disaster Imagination Game (DIG) is a tool for risk management planning. It is a table top exercise cum planning. Participants will first learn the possible damage estimation of their locality and put this information on maps. The scale of the maps can be both 1/5,000 and 1/500. The1/500 scale map can be utilized when the local community is more the focus, while the 1/5,000 scale can be utilized to examine public facilities and road networks in the wider coverage. Based on the damage estimation results, participants will be given guide questions, and by responding to these questions, participants will have a clearer image about the earthquake disaster. They will also learn the process of planning.

The uniqueness of DIG is that:

1) Participants can identify all the damage information with location and quantity,
2) Participants can make a concrete and realistic plan based on the data in the map,
3) Participants can make a clear linkage between damage estimation and risk management plan.

The first step is to identify the following information on the maps.

Damage Estimation Results Table

Category	Possible hazard and risk	color	Location	Scale
Infrastructure	Road	black		
	Railway	red		
	River	blue		
	Bridge	red		
Public facilities	Church	green	○	1/5,000
	School	green		
	Hospital	green		
	Barangay hall, City hall	green		
	Fire brigade	green		
Earthquake (model 08)	PHIVOLCS intensity	red/green/blue	○	1/5,000
	Valley Fault System	black thick marker	○	1/5,000
	Fissures w/elevation		×	1/5,000
	Liquefaction	yellow	○	1/5,000
Infrastructure & Building Damage	Building number		put actual number	1/5,000
	Totally damage (# and %)			
	Partly damage (# and %)			
	Bridge collapse (location)	green	○	
	Fire spread (location)	red	○	
	Amount of debris		Assumption	1/500
	Possible road blockage		Assumption	1/500
Human Damage	Population (A)		put actual number	1/5,000
	Death (B)			
	Injury (C)			
	Trapped (D)		Assumption	1/500
	Care Receiver E=A+B+C			1/500
	human capacity (F)	F=A-(B+C+D)		1/500

○：Locations were identified

×：Locations were identified not in the said scale but in small scale map because of the nature of the fault

In the next step, participants will define the roles of individuals, the community, and the barangay. Focused plans will be developed for Search and Rescue, Emergency Health Response, Fire Fighting, Evacuation, and Information Management. Plans will be at individual, community and Barangay level.

The following tables are the sample formats for the planning session. Audiovisual presentation

materials that describe the possible earthquake situation will facilitate effective planning opportunities. Knowledge sharing by disaster response agencies also helps participants imagine the precise emergency situation and leads to concrete plans. Participants will also learn how to prepare for the earthquake and actually prepare for it.
Disaster response agencies that can assist in promoting community based disaster preparedness can get first hand perceptions of community capacity and individual capacity by experiencing the process of the planning workshops.

Task allocation

Task	**Goal**	**Tasks in Emergency Time**			**Tasks in Ordinary Time**		
		Individual Response	Community Response	Bgy Response	Individual Response	Community Response	Bgy Response
Search and Rescue							
Emergency Medical							
Fire Extinguish							
Information Management							
Evacuation							
Public Awareness							

Planning Format

Task	Situation	What	Who	When	How
Search and Rescue	Emergency **1hr** **1 day** **72hr** **1 week**	Search & Rescue activities Cooperation & Coordination with Response Agencies			
	Ordinary	Equipment Skill training Drills			
Emergency Medical	Emergency	First aid treatment Transporting seriously injured Cooperation with epidemic control Reporting status of waste disposal			
	Ordinary	Training of first aid treatment Disseminating public sanitation knowledge Waste disposal management			
Fire Extinguish	Emergency	Preventing fire Initial fire suppression Fire alert			
	Ordinary	Learning how to operate small fire trucks, fire extinguisher Fire extinguish training Education on fire prevention Inspecting security and hazardous materials and risks			
Information Management **Incoming** **Outgoing**	Emergency	Information gathering (controlling rumors) Damage reporting to public authority Information distribution to general public			
	Ordinary	Knowing Earthquake disasters Community patrol Public relations Conducting Drill on Information gathering & information distribution			
Evacuation	Emergency	Evacuation call Roll call of evacuees Guiding Safe evacuation route			
	Ordinary	Safety inspection of evacuation route and area Conducting drill on evacuation and safety inspection			
Public Awareness	Emergency	No task (Responsibility of Info Management)			
	Ordinary	Disseminating Earthquake Disaster knowledge Organizing workshops			

Response demands vary in the time frame

In emergency planning, time sequence after the event is important, since the demands will change from right after the event, 3 minutes, 5 minutes, 1hour, 1 day, 72 hours, to 1 week. In the planning session, emergency period is defined as until 72 hours or until such time as adequate public help may reach communities.

Time Frame	Individual Actions	Community Actions
Earthquake hits	Stay Calm Don't panic Protect yourself	
3 seconds	**If you are indoor,** Stay under sturdy table and desk Brace yourself in the doorway or Stay in corner of your room **If you are outdoors** Move to a open area Move away from power lines, posts, trees, walls etc…	
1-2 minutes ***First Shaking stops***	Turn off fire sources Keep your doorway open Check safety of your family Wear shoes (no bare foot) Close gas cylinder (LPG tank) Shut down electricity breaker Bring your emergency kitbag	
3 minutes	Check if there is any fire around Extinguish fires, if any Check safety of your neighbors Be aware of aftershocks	Community people help each other to ascertain if there are injuries and missing people
5 minutes	Gather information from radio public addressing system Don't believe rumors Open phone lines for emergency calls Be aware of falling objects	**Information management group** starts gathering information within their community to transmit to barangay
5-10 minutes	Bring your children home Leave note of where you go	**Information management group** initiates contact with barangay for information exchange
10 minutes–several hours ***Emergency Response***	Search and rescue Fire extinguish Emergency medical Evacuation Information management	**Search and rescue group** will search for missing people and rescue trapped persons **Fire extinguish group** will extinguish fire by small fire fighting tank and bucket relay **Emergency medical group** will treat injuries
Several hours –72 hours (3 days) ***Evacuation***	Secure peace and order Management of the evacuation site	Setting evacuation site in coordination with barangay, LGU, DSWD etc. Special treatment for elderly, handicapped, pregnant women, and children

Guide questions for each task are shown below.

Search & Rescue
Do you have any knowledge about search and rescue?
What can ordinary people do for search and rescue in a devastating situation?
Do you know what kind of equipment do the barangay / your community have?
What kind of equipment should be installed and where should it be placed?
Who should be trained for search and rescue?

Emergency Medical
Do you have any knowledge for giving first aid?
Who will apply first aid?
Who should be trained to give first aid?
How do you manage and maintain sanitation and hygiene?
Who should be responsible for maintaining sanitation?
Where can you get clean portable water for medical treatment and drinking?
Where do you establish a temporary treatment area, if the health center cannot be utilized?

Fire Suppression
Ordinary time
How do we extinguish fire?
Do you have enough knowledge?
Do you have close relationships in your neighborhood?
Can people cooperate with each other to suppress fire?
Do you know how to suppress fire from different sources?
Emergency time
Who are you going to coordinate with?
Do you know the contact numbers?
If the numbers are not available, what are your alternatives?

Information Management
Ordinary time
How do you raise awareness of the possible earthquakes?
Do most people know about earthquake disasters?
When and how do you conduct earthquake drills?
How do you inform people having a drill?
Emergency time
How do you inform people that you are safe, if your phones are not functional?
What is your alternative way of disseminating information?
How do you inform the number of injured and trapped to the concerned rescuers?

Evacuation
Where is your evacuation site?
Who will direct the movement of evacuees from the place to evacuation site?
What could be the roles of the one in charge of Evacuation?
Who will secure the evacuation route?
Who will complete the list of evacuees?
How do you assure that all persons have evacuated?
Who will insure that the routes are clearly identified and known to residents concerned?

The list of the evacuees is very useful to identify

1) who have been evacuated
2) how much relief goods are needed

When evacuees move out, the transferred places need to be recorded. The list of residents by household unit is recommended to be prepared in ordinary time.

List of the evacuees (sample format)

List of evacuees at XXXXX evacuation center							
Name	Address	sex	age	Evacuation place	Contact number	Remarks (handicapped, elderly etc.)	Transferred place If any

Step 11 Testing and reviewing the plan

After completion of the plan, exercises are important to ensure that the plans are effective and workable. In this exercise, not only community people but also planners and members of disaster response organizations are essential to be involved. These opportunities will enable the testing of each disaster response agency's abilities and cooperation with each other. Moreover, testing the plan can identify the gray zone where more than two agencies are involved. Exercise can suggest the boundaries of tasks.

One cost effective exercise is a Table Top which can be conducted indoors employing a precisely planned scenario. The other option is an on-site exercise which provides communities first hand practical experience. On-site drills have two types: one is the training exercise and the other is scenario type drill. The training exercise is a basic thematic training on tasks such as search and rescue, first aid, fire extinguishing, and information management. This training is effective not only for earthquakes but also for fire and flood. Task force teams will be organized and the exercise will be based on the plan.

The scenario type drill is an advanced practice. In this exercise, only the controllers will know the scenario, and the rest of the people (called players) will react to the scenario provided by the controllers. Drawings of fires, road blockages, fallen trees, and dolls will be prepared. This training will be conducted in the community and include simulated fire occurrence and road blockage; human casualties will be set at the real community. Players need to search for fire extinguishers and first aid kits to identify the place where they are located. The process should be video taped and a debriefing session should be organized to share suggestions and opinions to improve the plan. Finally the plan should be revised. It is important to make and keep a schedule for reviewing and updating the plan. Regular exercises should be conducted to update the plan and to provide the community members an opportunity to practice the proper response to the disaster, ensuring that they know how to protect themselves and assist their neighbors.

5. AWARENESS RAISING (POSTERS)

To raise awareness of taking necessary actions for earthquake disaster preparedness at barangay and community level, three types of posters will be distributed to all barangays in Metro Manila and related agencies.

6. COMMITMENT BUILDING

DECLARATION OF COMMITMENT TO SUSTAIN THE COMMUNITY-BASED DISASTER MANAGEMENT PROGRAM

WHEREAS, Barangays 741 of Manila, Cupang of Muntinlupa, and Ugong of Pasig Cities respectively participate actively in the conduct of the Community-Based Disaster Management (CBDM) Activity of the Earthquake Impact Reduction Study for Metropolitan Manila (MMEIRS), Republic of the Philippines conducted by the Metropolitan Manila Development Authority (MMDA), Philippine Institute of Volcanology and Seismology (PHIVOLCS), and the Japan International Cooperation Agency (JICA) Study Team, and

WHEREAS, as Leaders of the afore-mentioned communities we benefited from the knowledge and skills shared to us from the exercise and find a need to continue pursuing CBDM activities in order to reduce our vulnerability from the earthquake hazard even after the MMEIRS has been completed.

NOW THEREFORE, in consideration of the preceding premises, we hereby collectively declare the following: That

1. We will continue, together with our Barangay Officials and Constituents, to regularly undertake public information activities and initiate disaster management programs;
2. We will exert our best effort to institutionalize CBDM activities in our respective Barangays and include it as part of our regular programs fully supported by Ordinances;
3. We will enlist the support of our respective Mayors and Sangguniang Panglungsod to provide financial allotment in order that we can sustain our CBDM activities;
4. We will solicit technical assistance from MMDA and PHIVOLCS, Office of Civil Defense, Bureau of Fire, Department of Health, Department of Social Welfare and Development, Department of Education, as well as other agencies involved with Disaster Management to improve our contingency planning and emergency management capacities, and
5. We will share the knowledge we have acquired in CBDM with other Barangays in Metropolitan Manila.

SO AFFIRMED THIS 5th day of February 2004.

ALFREDO F. REYNO, JR
Chairman, Bgy. 741
City of Manila

ARTEMIO A. SIMUNDAC
Chairman, Bgy. Cupang
Muntinlupa City

ARNALDO S. LEGASPI
Chairman, Bgy. Ugong
Pasig City

ATTESTED:

HON. JOEL L. ATIENZA, JR.
Mayor of Manila

HON. JAIME R. FRESNEDI
Mayor of Muntinlupa

HON. SOLEDAD C. EUSEBIO
Mayor of Pasig

BAYANI F. FERNANDO
Chairman, MMDA

RENATO U. SOLIDUM, JR.
Director, PHIVOLCS

DECLARATION OF SUPPORT TO SUSTAIN COMMUNITY-BASED DISASTER MANAGEMENT PROGRAM IN METROPOLITAN MANILA

WHEREAS, the Community-Based Disaster Management (CBDM) Activity component of the Earthquake Impact Reduction Study for Metropolitan Manila (MMEIRS), Republic of the Philippines conducted by the Metropolitan Manila Development Authority (MMDA), Philippine Institute of Volcanology and Seismology (PHIVOLCS), and the Japan International Cooperation Agency (JICA) Study Team, is considered to play a significant factor in making Metro Manila Seismic-Safe;

WHEREAS, the holding of CBDM activities and exercises as part of MMEIRS yielded positive results and response from the pilot communities and indicate a potential for success in enhancing the earthquake disaster preparedness of the other Barangays in Metro Manila,

WHEREAS, there is further need to complement the skills and knowledge of the other communities that would undertake CBDM activities in their respective Barangays, and

WHEREAS, there is a need to sustain CBDM activities to complement other disaster mitigation measures in Metro Manila.

NOW THEREFORE, in consideration of the foregoing, we hereby pledge our commitment to help sustain Community-Based Disaster Management (CBDM) in the entire Metropolitan Manila Area by providing technical support to communities and Barangays that would undertake CBDM activities, in coordination with their respective Local Government Units.

SO AFFIRMED THIS 5th day of February 2004.

BAYANI F. FERNANDO
Chairman, MMDA

RENATO U. SOLIDUM, JR.
Director, PHIVOLCS